PIXMA MP500

SERVICE MANUAL

Canon

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I. MANUAL OUTLINE

This manual consists of the following three parts to provide information necessary to service the PIXMA MP500:

Part 1: Maintenance
Information on maintenance and troubleshooting of the PIXMA MP500

Part 2: Technical Reference
New technology and technical information such as FAQ's (Frequently Asked Questions) of the PIXMA MP500

Part 3: Appendix
Block diagrams and pin layouts of the PIXMA MP500

Reference:
This manual does not provide sufficient information for disassembly and reassembly procedures. Refer to the graphics in the separate Parts Catalog.

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Part 1

MAINTENANCE

1. MAINTENANCE

1-1. Adjustment, Periodic Maintenance, Periodic Replacement Parts, and Replacement Consumables by Service Engineer

(1) Adjustment

	Adjustment	Timing	Purpose	Tool	Approx. time
	Destination settings (EEPROM settings)	At logic board ass'y replacement	To set the destination.	None. Perform in the service mode.	1 min.
	Waste ink counter resetting (EEPROM settings)	- At logic board replacement - At waste ink absorber replacement	To reset the waste ink counter.	None. Perform in the service mode.	1 min.
	Waste ink amount setting	At logic board replacement	To set the waste ink amount to the waste ink counter.	None. Perform in the service mode.	2 min.
	Paper feed motor position adjustment	At paper feed motor replacement	To adjust the belt tension. (Position the paper feed motor so that the belt is stretched tight.)	None.	5 min.
	CD / DVD detection sensor light volume correction*1	- At logic board replacement - At carriage unit replacement	To correct the light volume for the CD / DVD detection sensor.	None. Perform in the service mode.	2 min.
	Grease application	- At carriage unit replacement - At PR shaft ass'y replacement - At CL base or CL gear replacement	- To maintain sliding properties of the carriage shaft and the lift cam shaft. - To protect the machine's sliding portions (gears).	FLOIL KG-107A	1 min.
New	Ink system function check	- At logic board replacement - At platen unit replacement - At carriage unit replacement	To maintain detection functionality for presence of the ink tanks and each ink tank position.	None. Perform in the service mode.	1 min.
	LCD language settings	At logic board replacement	To set the language to be displayed on the LCD.	None. Perform in the user mode.	1 min.
	Document pressure sheet position adjustment	- At document cover unit replacement		None.	2 min.

Note: DO NOT loosen the red screws at both ends of the carriage shaft, securing the print head position, as they are not re-adjustable.

The red screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit.

*1: Only for CD / DVD printing supported regions.

(2) Periodic maintenance
No periodic maintenance is necessary.

(3) Periodic replacement parts
There are no parts in this machine that require periodic replacement by a service engineer.

(4) Replacement consumables
There are no consumables that require replacement by a service engineer.

1-2. Customer Maintenance

Adjustment	Timing	Purpose	Tool	Approx. time
Print head alignment	At print head replacement.	To ensure accurate dot placement.	- Machine buttons - Computer (automatic settings via the MP driver)	3 min.
Print head cleaning	When print quality is not satisfying.	To improve nozzle conditions.	- Machine buttons - Computer (settings via the MP driver)	1 min.
Print head deep cleaning	When print quality is not satisfying, and not improved by print head cleaning.	To improve nozzle conditions.	- Machine buttons - Computer (settings via the MP driver)	2 min.
Ink tank replacement	When an ink tank becomes empty. ("No ink error" displayed on the monitor, or short flashing of an ink tank LED)	-----	-----	2 min.
Paper feed roller cleaning	When paper does not feed properly.	To clean the paper feed rollers.	Machine buttons	2 min.
CD / DVD print position adjustment	At CD / DVD printing, when necessary.	To correct CD / DVD print position.	Computer (application software)	5 min.
Bottom plate cleaning	When the back side of the paper is smeared.	To clean the platen ribs.	- Plain paper - Computer (settings via the MP driver)	1 min.
ASF sub- roller cleaning	When the paper fed from the ASF is smeared due to ink mist attached to the ASF sub-rollers.	To clean the ASF sub-rollers.	- Plain paper - Machine buttons (paper feed roller cleaning) [See Part 2, 4. FAQ, How to make and set the ASF sub-roller cleaning sheet, for details]	1 min.
Scanning area cleaning	When the platen glass is dirty.	Clean the platen glass.	None.	1 min.

1-3. Product Life

(1) Machine

Specified print volume (I) or the years of use (II), whichever comes first.

(I) Print volume: 12,000 pages

Black	1,500 character pattern	5,400 pages
Color	A4, 7.5% duty per color pattern	3,600 pages
	A4, photo, borderless printing	300 pages
	4 x 6, photo, borderless printing	2,200 pages
	Postcard, photo, borderless printing	500 pages

(II) Years of use: 5 years of use

(2) Print head

Print volume: 12,000 pages

Black	1,500 character pattern	5,400 pages
Color	A4, 7.5% duty per color pattern	3,600 pages
	A4, photo, borderless printing	300 pages
	4 x 6, photo, borderless printing	2,200 pages
	Postcard, photo, borderless printing	500 pages

(3) Ink tank (target value)

Pattern	Ink tank used	Print yield
Black text	PGI-5BK	Approx. 820 pages
Color chart	CLI-8BK	Approx. 2,000 pages
	CLI-8Y	Approx. 600 pages
	CLI-8M	Approx. 540 pages
	CLI-8C	Approx. 850 pages
Photo chart	CLI-8BK	Approx. 1,650 pages
	CLI-8Y	Approx. 310 pages
	CLI-8M	Approx. 290 pages
	CLI-8C	Approx. 430 pages

Black text: When printing the Canon standard pattern (1,500 characters per page) on A4 size plain paper, with the default settings in the Windows XP driver, using Word 2003.

Color chart: When printing the ISO/JIS-SCID N5 pattern on A4 size plain paper in bordered printing, with the default settings in the Windows XP driver, using Photoshop 7.0.

Photo chart: When printing the Canon standard pattern on 4" x 6" Photo Paper Plus Glossy in borderless printing, with the default settings in the Windows XP driver, using Windows XP Photo Printing Wizard.

The print yield in the table above is an average value measured in continuous printing, using the ink tank immediately after it is unsealed, until the ink is out. Ink yield may vary depending on texts and photos printed, application software, print mode, and type of paper used.

When the machine is turned on and while printing, each ink may be used for protecting the print head and maintaining print quality.

1-4. Special Tools

Name	Tool No.	Application	Remarks
FLOIL KG-107A	QY9-0057-000	To be applied to the sliding portions of the carriage shaft and lift cam shaft.	In common with the S500 and S520.

1-5. Serial Number Location

On the carriage flexible cable holder (visible on the right of the carriage after the machine is turned on, the scanning unit is opened, and the carriage moves to the center).

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<Part 1: 1. MAINTENANCE>

2. LIST OF ERROR DISPLAY / INDICATION

Errors and warnings are displayed by the following ways:

1) Operator call errors are indicated by the Alarm LED lit in orange, and the error and its solution are displayed on the LCD in text and by icon.
2) In printing from a computer, warnings are displayed on the MP driver Status Monitor.
3) Error codes are printed in the "operator call/service call error record" area in EEPROM information print.

<Buttons valid at an operator call error>

- ON/OFF button:

  The machine is turned off.

- OK button:

  After an error is cleared, the machine recovers. With some operator call errors, the error is automatically cleared when the error cause is corrected, so the OK button is not necessary to be pressed.

- Stop/Reset button:

  The job at an operator call error is cancelled to clear the error.

2-1. Operator Call Errors (by Alarm LED Blinking in Orange)

Error [Error code]	Message on the LCD	Solution	Remarks
No paper (ASF). [1000]	Auto sheet feeder. There is no paper. Load paper and press [OK].	Set the paper in the ASF, and press the OK button.	
No CD / DVD tray. [1001]*1	There is no CD-R tray. Attach the tray and press [OK].	Set the CD / DVD tray, and press the OK button.	
No paper in the front paper feed cassette. [1003]	Cassette. There is no paper. Load paper and press [OK].	Set the paper in the cassette, and press the OK button.	
No CD or DVD. [1002] *1	Printable disc is not set. Correctly place a disc in the CD-R tray and press [OK].	Set a CD or DVD in the CD / DVD tray (which is ejected at error occurrence), and inset the CD / DVD tray in the proper position. Then, press the OK button.	
Paper jam. [1300]	The paper is jammed. Clear the paper and press [OK].	Remove the jammed paper, and press the OK button.	Error in paper feeding from the ASF.
Paper jam in the rear guide. [1303]			Error in the duplex printing unit.
Paper jam in the under guide. [1304]			Error in paper feeding from the cassette.
Front door close error. [1250]	Paper output tray is closed. Press the lower left button to open the paper output tray.	Open the paper output tray.	The error is indicated if the paper output tray is closed at start of a print job, or while a print job is being performed.
No ink. [1600]	Ink has run out. Replace the ink tank and close the cover.	Replace the empty ink tank(s), or press the OK button.	Pressing the OK button will clear the error without ink tank replacement, however, ink may run out during printing.
Ink tank not installed.		Install the applicable ink tank(s)	

[1660]		properly, and confirm that the LED's of all the ink tanks light red.	
The print head is not installed [1401], or it is not properly installed (print head temperature sensor error [1403] / faulty EEPROM data of the print head [1405]	Print head is not installed. Install the print head.	Install the print head properly.	
	The type of print head is incorrect. Install the correct print head.		
Inner cover open. [1841]*2	Inner cover is open. Close the inner cover and press [OK].	Close the inner cover, and press the OK button.	
Inner cover open during printing on paper. [1846]*2		Close the inner cover, and press the OK button.	
Inner cover open during printing on paper (print continuable). [1851]*1		Close the inner cover, and press the OK button.	
Inner cover open during printing on paper (print NOT continuable). [1856]*1		Close the inner cover, and press the OK button to clear the error. The paper being printed at error occurrence will be ejected without printing the remaining data for the ejected paper, then printing will resume from the next page.	
Inner cover closed during CD / DVD printing (print continuable). [1850]*1	Open the inner cover, place the CD-R tray and press [OK].	Open the inner cover which functions as the CD / DVD tray feeder, set the CD / DVD tray in the feeder, and press the OK button.	
Inner cover closed during CD / DVD printing (print NOT continuable). [1855]*1		Open the inner cover, and press the OK button to clear the error. The CD or DVD being printed at error occurrence will be ejected without printing the remaining data for the ejected CD or DVD, then the next print job will be done.	
Multiple ink tanks of the same color installed. [1681]	(Applicable ink tank icon) More than one ink tank of the following color is installed.	Replace the wrong ink tank(s) with the correct one(s).	
Ink tank in a wrong position. [1680]	Some ink cartridges are not installed in place.	Install the ink tank(s) in the correct position.	
Warning: The waste ink absorber becomes almost full. [1700]	The waste ink absorber is almost full. Press [OK] to continue but early replacement recommended. <See manual>	Press the OK button.	The service call error, indicating the waste ink absorber is full, is likely to occur soon.
The connected digital camera or digital video camera does not support Camera Direct Printing. [2001]	Incompatible device detected. Remove the device.	Remove the cable between the camera and the machine.	
Automatic duplex printing cannot be performed. [1310]	This paper is not compatible with duplex printing. Remove the paper and press [OK].	Press the OK button to eject the paper being used at error occurrence. Printing will resume from on the front side of the next page.	Data which was to be printed on the back side of paper at error occurrence is skipped (not printed).

Failed in automatic print head alignment. [2500]	Auto head align has failed. Press [OK] and repeat operation. <See manual>	Press the OK button. - If paper is being fed at error occurrence, the error is indicated after the paper is ejected. - If the error occurs, the print head alignment values are not changed. - After exit from the error by the OK button, the automatic print head alignment will not be re-done.	The error is indicated when the pattern is not printed due to no ink or non-ejection of ink, or when the sensor's AD value is incorrect.
The remaining ink amount unknown. [1683]	(Applicable ink tank icon) The remaining level of the following ink cannot be correctly detected.	An ink tank which has once been empty is installed. Replace the applicable ink tank with a new one.	Printing with a once-empty or refilled ink tank can damage the print head. If printing is continued without replacing the refilled ink tank, press the OK button for 5 sec. or longer to record the use of a refilled ink tank. Note: After the above operation, the function to detect the remaining ink amount is disabled.
Ink tank not recognized. [1684]	(Applicable ink tank icon) The following ink tank cannot be recognized.	A non-supported ink tank is installed (the ink tank LED is turned off). Install the supported ink tanks.	
Ink tank not recognized. [1410 to 1419]		An error occurred in an ink tank (the ink tank LED is turned off). Replace the ink tank(s).	
Scanning unit (printer cover) open. [1200]	Cover is open. Close the cover.	Close the scanning unit (printer cover).	

*1: Only for models supporting CD / DVD printing

*2: Only for models not supporting CD / DVD printing

2-2. Service Call Errors (by Cyclic Blinking in Orange (Alarm LED) and Green (ON/OFF button), or Alarm LED Lit in Orange)

Service call errors are indicated by the number of cycles the Alarm LED and ON/OFF button blink, and the corresponding error code is displayed on the LCD.

Cycles of blinking in orange (Alarm LED) and green (ON/OFF button)	Error [Error code]	Conditions	Solution (Replacement of listed parts, which are likely to be faulty)
2 times	Carriage error [5100]	An error occurred in the carriage encoder signal.	- Carriage unit (QM2-2922) - Timing slit strip film (QC1-6394)

			- Logic board ass'y (QM2-3078)*1 - Carriage motor (QK1-1500)
3 times	Line feed error [6000]	An error occurred in the line feed signal.	- Timing sensor unit (QM2-2683) - Timing slit disk film (QC1-6229) - Feed roller ass'y (QL2-0925) - Platen unit (QM2-2923) - Logic board ass'y (QM2-3078)*1 - Paper feed motor (QK1-1502)
4 times	Purge cam sensor error [5C00]	An error occurred in the purge unit.	- Purge unit (QM2-2925) - Logic board ass'y (QM2-3078)*1
5 times	ASF (cam) sensor error [5700]	This error takes place when feeding paper from the ASF after an error occurred in the ASF cam sensor.	- Sheet feed unit (QM2-2916)
6 times	Internal temperature error [5400]	The internal temperature is not proper.	- Logic board ass'y (QM2-3078)*1
7 times	Waste ink absorber full [5B00]	The waste ink absorber is full.	- Ink absorber kit (QY5-0146)
8 times	Print head temperature rise error [5200]	The print head temperature exceeded the specified value.	- Print head (QY6-0059) - Logic board ass'y (QM2-3078)*1
9 times	EEPROM error [6800]	A problem occurred in writing to the EEPROM.	- Logic board ass'y (QM2-3078)*1
11 times	Carriage lift mechanism error [5110]	The carriage did not move up or down properly.	- PR lift shaft ass'y (QL2-0936) - Sheet feed unit (QM2-2916) - Logic board ass'y (QM2-3078)*1 - Carriage lift sensor unit (QM2-3092)
12 times	AP position error [6A00]	An error occurred in the AP motor during purging operation.	- Sheet feed unit (QM2-2916) - Logic board ass'y (QM2-3078)*1 - Purge unit (QM2-2925)
13 times	Paper feed position error [6B00]	An error occurred in the paper feed motor.	- Sheet feed unit (QM2-2916) - Logic board ass'y (QM2-3078)*1
14 times	Paper feed cam sensor error [6B10]	An error occurred in the paper feed cam sensor during paper feeding from the front paper feed cassette. This error is also indicated when the waste ink counter is 60% or more, and a paper jam occurs in the under guide.	- Sheet feed unit (QM2-2916) - Logic board ass'y (QM2-3078)*1
15 times	USB Host VBUS overcurrent [9000]	The USB Host VBUS is overloaded.	- Logic board ass'y (QM2-3078)*1
16 times	Valve sensor error [6C00]	An error occurred in the valve sensor during cleaning.	- Logic board ass'y (QM2-3078)*1

			- Purge unit (QM2-2925)
17 times	Motor driver error [6D00]	The AD conversion value indicating the motor driver temperature is not proper.	- Logic board ass'y (QM2-3078)*1
19 times	Ink tank position sensor error [6502]	None of the ink tank position is detected.	- Platen unit (QM2-2923) - Logic board ass'y (QM2-3078)*1
20 times	Other hardware error [6500]	The PCI bus error is detected by the ASIC.	- Logic board ass'y (QM2-3078)*1
22 times	Scanner error	The scanner unit cannot detect the home position, or the scanner unit warming-up is not done properly at power-on. On the LCD, "Scanner is not operating correctly." is displayed.	- Scanner unit (QM2-2905)
Continuous alternate blinking	ROM error	The check sum value is incorrect in the ROM check at hard-power-on.	- Logic board ass'y (QM2-3078)*1
Alarm LED lit	RAM error	The RAM error occurred in the RAM check at hard-power-on.	- Logic board ass'y (QM2-3078)*1

*1: Before replacement of the logic board ass'y, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the ink absorber kit (QY5-0146) when replacing the logic board ass'y.
[See Section 3-3. Adjustment / Settings, (5) Service mode, for details.]

2-3. Other Error Messages

Message on the LCD	Cause	Solution
Printing is unavailable. Data received via wireless communication is not photo data.	The received image data was invalid in infrared communication from a mobile phone.	The error message is displayed for a while, then the LCD automatically returns to the initial screen you see when the COPY, SCAN, or MEMORY CARD button is pressed.
The selected paper cannot be fed from cassette. Change the paper source.	The paper type being used is not supported for paper feeding from the cassette. (Business Card, Credit Card size paper and Photo Stickers are not supported.)	Change the paper source to the ASF.
Cannot specify the followings together. Change one of the settings.	Settings made conflict each other.	The error message is displayed for a while, then the LCD automatically returns to the display before the error occurrence.
Device memory is full. Cannot continue process. Reduce the number of photos to print.	The memory is not sufficient to do the print job.	Reduce the amount of data to be printed, or print from a computer.
Failed to scan. Either document cannot be scanned or is not placed on the platen glass.	The machine failed in scanning the document for Fit-to-page copy.	Press the Ok button to clear the error. The LCD automatically returns to the display before the error occurrence.
Press <>. (<>: Color button icon)	The Black button was pressed, but it is invalid.	A temporary error. Press the Color button to continue the operation.
Press <>. (<>: Black button icon)	The Color button was pressed, but it is invalid.	A temporary error. Press the Black button to continue the operation.
There are no photos in memory card.	Supported image files are not in the memory card.	The error message is displayed for a while, then disappears.
The value exceeds the number of copies you can print.	During selecting images or specifying the number of copies, the total print quantity exceeds the prescribed value of	After the error message is displayed for a while, the last operation before the error is cancelled, and the total print quantity

	999.	returns to the value before the error.
Memory card is not set. Insert the card after checking the direction.	No memory card is inserted in the slot.	Set a memory card.
DPOF information is not saved in the memory card.	DPOF print was selected in the menu, but no DPOF files are contained in the memory card.	The error message is displayed for a while, then the LCD automatically returns to the display before the error occurrence.
The number of copies to print is not set. Input the number of copies.	Multi-photo print was attempted without specifying the print quantity (with the print quantity left "0" (zero)).	The error message is displayed for a while, then disappears. Specify the print quantity.
This layout is available only for A4 or 8.5"x11"(LTR).	In Layout print, "Mixed 1, 2, or 3" which is available only with A4 or LTR size paper is selected, but the paper size is not set to A4 or LTR.	The error message is displayed for a while, then the LCD automatically returns to the display before the error occurrence.
Settings cannot be changed when printing stickers.	With Sticker print selected, the Settings button was pressed.	The error message is displayed for a while, then the LCD automatically returns to the display before the error occurrence.
Change the setting after removing the card.	With a memory card inserted in the slot, change of the Read/Write attribute was attempted.	The error message is displayed for a while, then the LCD automatically returns to the display before the error occurrence.
The card is currently write-enabled. Set to read-only mode before performing operation.	With the memory card set to the Write-enabled mode, Card Direct printing operation was attempted from the menu.	The error message is displayed for a while, then the LCD automatically returns to the display before the error occurrence.
The paper size is not correct. Check the page size you have set.	Non-supported size of paper for Camera Direct printing is selected.	Cancel printing on the digital camera.
Failed to scan Photo Index Sheet. Check the orientation, position and marking. <See manual>	The machine failed in scanning the Photo Index Sheet.	Press the OK button to clear the error. The LCD automatically returns to the display before the error occurrence.
Feed switch cannot be changed.	The paper source cannot be changed from the cassette to the ASF, or vice versa.	Turn off the machine, and turn it on again.

2-4. Warnings

Warning	Message on the LCD	Solution
Low ink	The following ink is low. Continue? (Icon of each ink tank) Yes No	- Select **Yes**, and press the OK button. => Printing starts, and it is indicated on the LCD. - Select **No**, and press the OK button. => Printing is cancelled, and the LCD returns to the display immediately before printing was attempted.
	In Camera Direct Printing, only "Yes" can be selected.	
Print head temperature rise	If the print head temperature does not fall, the error code "5200" is displayed, indicating the print head temperature rise error.	When the print head temperature falls, the error is automatically cleared. Note: If the print head temperature exceeds the specified limit when the scanning unit (printer cover) is opened, the carriage does not move to the ink tank replacement position.
Protection of excess	If the print head temperature does not fall, the	If the print head temperature exceeds the

rise of the print head temperature	error code "5200" is displayed, indicating the print head temperature rise error.	specified limit, an intermission is inserted during printing.
Restrictions on paper	The current paper cannot be set. Change the size and type.	Re-select the supported paper type and size.
Recommendation of the print head alignment (only on arrival of the machine)	Head alignment required. Load paper and press [OK]. Yes No	- Select **Yes**, and press the OK button. => Automatic print head alignment is done. - Select **No**, and press the OK button. => The procedures on arrival of the machine are finished.
USB cable not connected	Connect USB cable and turn on the PC.	Connect the USB cable.
Cancellation of image select information	Reset the selected photo information? Yes No	When one or more images are selected in Multi-photo print or Layout print, and if a user tries to display the menu or sub-menu, the message is displayed. - Select **Yes**, and press the OK button. => The image selection is cancelled, and the menu or sub-menu is displayed. - Select **No**, and press the OK button. => The LCD returns to the display immediately before the message was displayed.

2-5. Troubleshooting by Symptom

	Symptom	Solution
Faulty operation	The power does not turn on. The power turns off immediately after power-on.	- Confirm the connection of - the power cord, and - between the logic board and the power supply unit. - Replace the - AC adapter, or - logic board ass'y[*1].
	A strange noise occurs.	- Remove foreign material. - Attach a removed part if any. - Check the operation of the moving parts (such as purge unit, carriage unit, and paper feeding mechanism) - Replace a faulty part, if any.
	Nothing is displayed on the LCD.	- Confirm the connection between the operation panel, the scanner unit, and the logic board. - Replace the - LCD, or - logic board ass'y[*1].
	A portion of the LCD is not displayed.	- Perform the button and LCD test in the service mode, and confirm that the LCD is displayed without any segments missing. - Confirm the connection between the operation panel, the scanner unit, and the logic board. - Replace the

		- LCD, or - logic board ass'y[*1].
	Paper feed problems (multi-feeding, skewed feeding, no feeding)	- Examine the inside to confirm that no parts are damaged, and the rollers are clean. - Remove foreign material. - Adjust the paper guide properly. - Confirm the connection of each harness and the logic board. - Replace the - sheet feeder unit, - cassette, or - logic board ass'y[*1].
	Carriage movement problems (contact to other parts, strange noise)	- Confirm that the timing slit strip film is free from damage or grease. - Clean the timing slit strip film. - Replace the - timing slit strip film, or - carriage unit. - Remove foreign material.
	Faulty scanning (no scanning, strange noise)	- Confirm the connection between the scanner unit and the logic board. - Replace the - scanner unit, or - logic board ass'y[*1].
Unsatisfactory print quality	No printing, or no color ejected.	- Replace the - ink tank, - print head[*2], or - logic board ass'y[*1]. - Remove foreign material from the purge unit caps, if any. - Replace the purge unit.
	Printing is faint, or white lines appear on printouts even after print head cleaning. Line(s) not included in the print data appears on printouts.	- Remove and re-install the print head. - Replace the - ink tank, - print head[*2], - purge unit, or - logic board ass'y[*1].
	Paper gets smeared.	- Feed several sheets of paper. - Perform bottom plate cleaning. - Clean the paper path with cotton swab or cloth. - Clean the ASF sub-rollers.
	A part of a line is missing on printouts.	- Replace the - ink tank, or - print head[*2]. - Perform print head alignment.
	Color hue is incorrect.	- Replace the - ink tank, or - print head[*2]. - Perform print head alignment.
	Printing is incorrect.	Replace the logic board ass'y[*1].

	No ejection of black ink.	- Replace the - logic board ass'y[*1], - ink tank, or - print head[*2]. - Remove foreign material from the purge unit caps, if any. - Replace the purge unit.
	Graphic or text is enlarged on printouts.	**When enlarged in the carriage movement direction:** - Clean grease or oil off the timing slit strip film - Replace the - timing slit strip film, - carriage unit, or - logic board ass'y[*1]. **When enlarged in the paper feed direction:** - Clean grease or oil off the timing slit disk film - Replace the - timing slit disk film, - timing sensor unit, or - logic board ass'y[*1].
Faulty scanning	No scanning.	- Confirm the connection between the scanner unit and the logic board ass'y. - Replace the - scanner unit, or - logic board ass'y[*1].
	Streaks or smears on the scanned image.	- Clean the platen glass. - Confirm the connection between the scanner unit and the logic board ass'y. - Replace the - scanner unit, or - logic board ass'y[*1].

*1: Before replacement of the logic board ass'y, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the ink absorber kit (QY5-0146) when replacing the logic board ass'y.
[See Section 3-3. Adjustment / Settings, (5) Service mode, for details.]

*2: Replace the print head only after the print head deep cleaning is performed 2 times, and when the problem persists.

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<Part 1: 2. LIST OF ERROR DISPLAY / INDICATION>

3. REPAIR

3-1. Notes on Service Part Replacement (and Disassembling / Reassembling)

Service part	Notes on replacement*1	Adjustment / settings	Operation check
Logic board ass'y QM2-3078	- Before removal of the logic board ass'y, remove the power cord, and allow for approx. 1 minute (for discharge of capacitor's accumulated charges), to prevent damages to the logic board ass'y. - Before replacement, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the ink absorber kit when replacing the logic board ass'y. [See 3-3. Adjustment / Settings, (5) Service mode, for details.]	**After replacement:** 1. Initialize the EEPROM. 2. Reset the waste ink counter. 3. Set the destination in the EEPROM. 4. Correct the CD / DVD and automatic print head alignment sensors. 5. Check the ink system function. [See 3-3. Adjustment / Settings, (5) Service mode, for details of 1 to 5] 6. Perform the print head alignment in the user mode.	- EEPROM information print - Service test print - Printing via USB connection - Direct printing from a digital camera
Ink absorber kit QY5-0146		**After replacement:** 1. Reset the waste ink counter. [See 3.3. Adjustment / Settings, (5) Service mode.]	- Service test print - EEPROM information print
Carriage unit QM2-2922		**At replacement:** 1. Apply grease to the sliding portions. [See 3-3. Adjustment / Settings, (2) Grease application.] **After replacement:** 1. Correct the CD / DVD and automatic print head alignment sensors. [See 3.3. Adjustment / Settings, (5) Service mode.] 2. Check the ink system function. [See 3.3. Adjustment / Settings, (5) Service mode.] 3. Perform the print head alignment in the user mode.	- Service test print (Confirm CD / DVD and automatic print head alignment sensor correction, and ink system function.)
Paper feed motor QK1-1502	- The red screws securing the paper feed motor are allowed to be loosened. (DO NOT loosen any other red screws.)	**At replacement:** 1. Adjust the paper feed motor. [See 3-3. Adjustment / Settings, (1) Paper feed motor adjustment.]	
Platen unit: QM2-2313	- By attaching the tape at the specified 2 locations,	**At replacement:**	After the machine unit is assembled in the bottom

Purge unit: QM2-2925 Waste ink tube: QC1-6458 Waste ink tube holder: QC1-6460	secure the waste ink tube to the waste ink tube holder.	1. To protect the waste ink tube from being pinched when reassembling the machine unit chassis into the bottom case unit, tape the tube (at 2 locations). [See 3-2. Special Notes on Repair Servicing, (5) Machine unit and bottom case unit assembly.]	case unit, the tube conditions are not visible. For confirmation of the tube conditions, perform the manual purging 3 or 4 times, and confirm that no strange noise is heard.
Platen unit QM2-2923		**At replacement:** 1. Check the ink system function. [See 3.3. Adjustment / Settings, (5) Service mode.]	- Service test print
PR lift shaft ass'y: QL2-0936 CL input gear: QC1-6213		**At replacement:** 1. Apply grease to the sliding portions. [See 3.3. Adjustment / Settings, (2) Grease application.]	- Service test print
Timing slit strip film QC1-6394 Timing slit disk film QC1-6229	- Upon contact with the film, wipe the film with ethanol. - Confirm no grease is on the film. (Wipe off any grease thoroughly with ethanol.) - Do not bend the film	**After replacement:** 1. Perform the print head alignment in the user mode.	- Service test print
Print head QY6-0059		**After replacement:** 1. Perform the print head alignment in the user mode.	- Service test print

*1: General notes:

- Make sure that the flexible cables and wires in the harness are in the proper position and connected correctly.

  [See 3-2. Special Notes on Repair Servicing, (4) Flexible cable and harness wiring, connection, for details.]

- Perform the manual purging 3 to 4 times to confirm that no strange noise is heard.

  [See 3-2. Special Notes on Repair Servicing, (5) Machine unit and bottom case unit assembly.]

- Do not drop the ferrite core, which may cause damage.
- Protect electrical parts from damage due to static electricity.
- Before removing a unit, after removing the power cord, allow the machine to sit for approx. 1 minute (for capacitor discharging to protect the logic board ass'y from damages).
- Do not touch the timing slit strip film and timing slit disk film. No grease or abrasion is allowed.
- Protect the units from soiled with ink.
- Protect the housing from scratches.
- Exercise caution with the red screws, as follows:

  i. The red screws of the paper feed motor may be loosened only at replacement of the paper feed motor unit (DO NOT loosen them in other cases).

  ii. DO NOT loosen the red screws on both sides of the main chassis, securing the carriage shaft positioning (they are not adjustable in servicing).

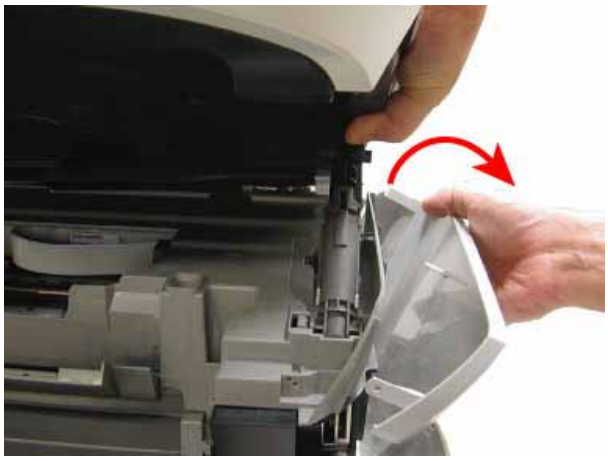
3-2. Special Notes on Repair Servicing

(1) External cover and scanner unit removal

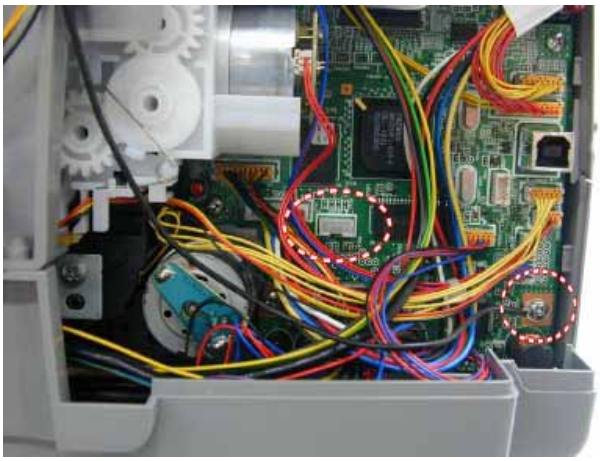
(I) Remove 2 screws from the left and right sides of the paper support unit.

(II) Open the scanner cover, and remove 2 screws from the front left and right sides of the unit.

(III) While holding the scanner unit, remove the side cover L and R (QC1-7918 / 7919).



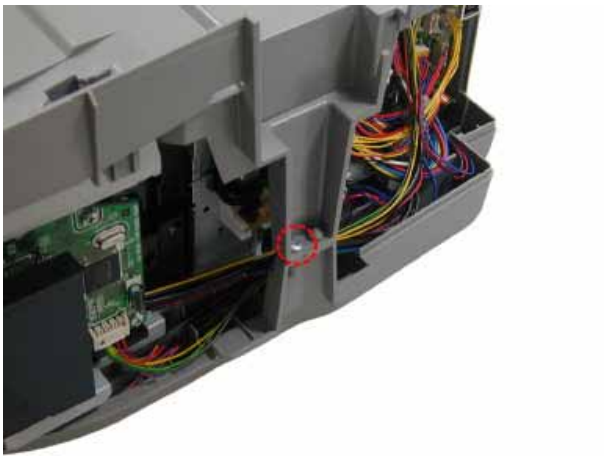
(IV) Remove 2 flexible cables between the logic board and the scanner unit, 1 connector, 2 ground wires (the one between the scanner unit and the logic board, and the one between the scanner unit and the chassis AC adapter side), then separate the scanner unit from the machine unit.



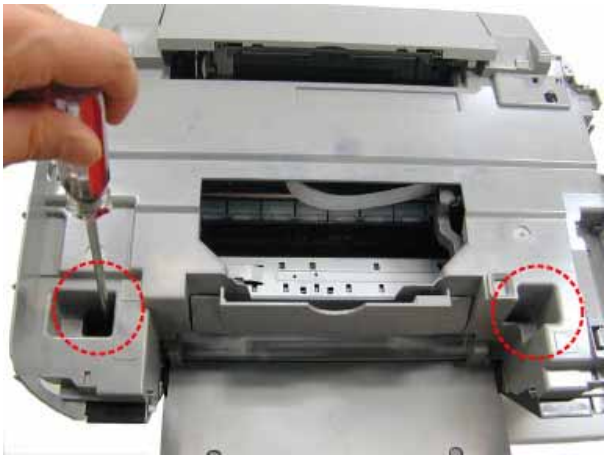
(V) While pushing the tab to the left as shown below, remove the scanner stop arm unit (QM2-2928).

When assembling the scanner stop arm unit, make sure it is in the correct orientation, as shown in the photos below (overhead view).

(VI) To remove the main case unit, remove 2 screws on the left and right sides, as shown below.



(VII) Remove 2 screws.



(VIII) Release 2 hooks on the rear side of the machine, and remove the main case unit.

(2) Panel front cover L and R (QC1-7592 / 7593) removal

(I) Remove the operation panel L and R.

(II) While releasing the internal hook by inserting a pair of tweezers or a flat-blade screwdriver into the hole, remove the panel front cover L and R, as shown in the photos below. Be careful not to break the hook.

How to use the screwdriver to release the hook (the panel front cover is removed for clear vision):

(3) Document pressure sheet replacement

Follow the procedures below when replacing the document pressure sheet:

(I) Position one of the corners of the document pressure sheet at the reference mark.

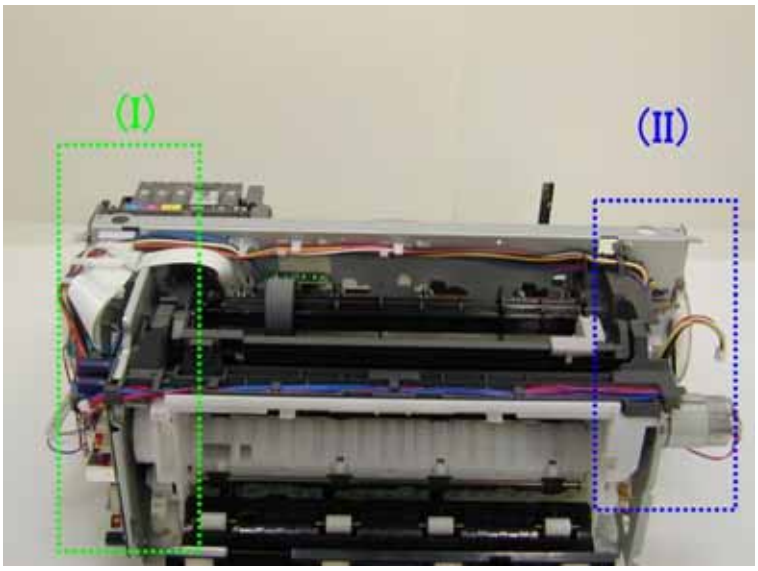
(II) The 4 corners of the document pressure sheet will be fixed to the document cover with the adhesive tape when the cover is closed.

(III) To eliminate a play between the document cover and the platen glass, move the document cover in the direction of the red arrow in the photo below until it stops, then close the cover.

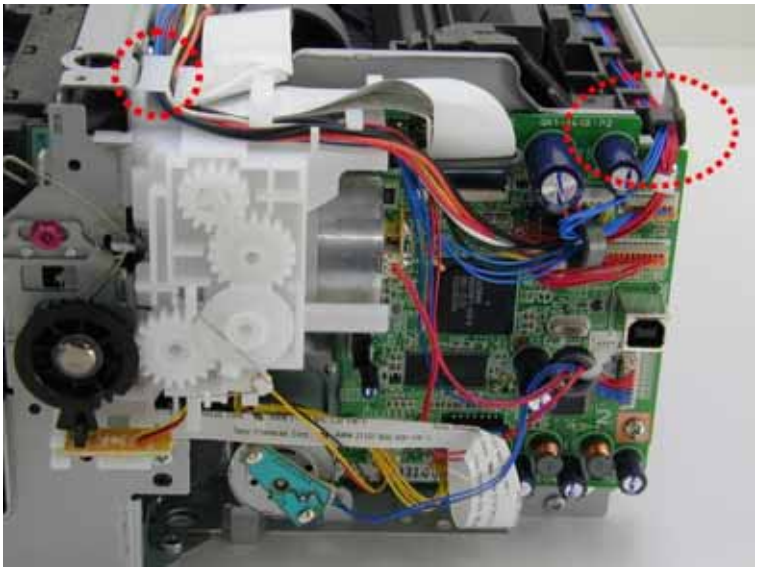
(IV) Open the document cover unit, and visually confirm that the document pressure sheet is fixed to the cover properly (no significant shift from the specified position).

(4) Flexible cable and harness wiring, connection

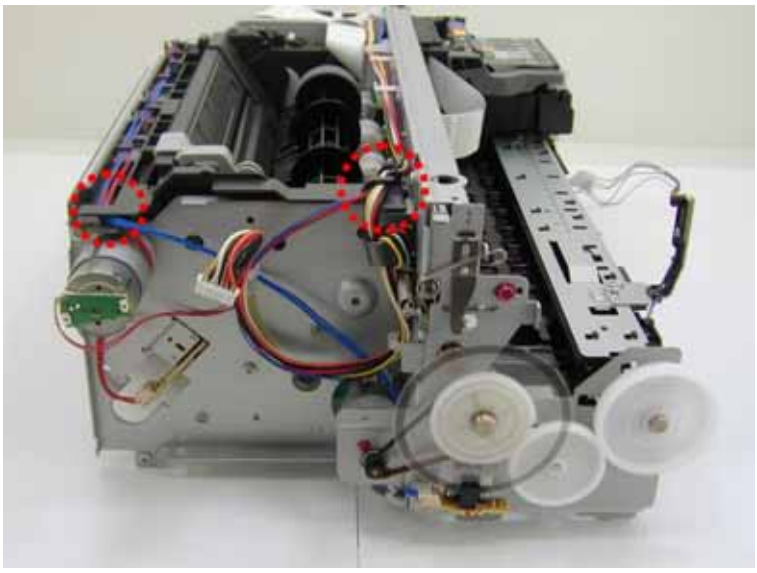
Be careful of wiring of the flexible cables and harness. Improper wiring or connection may cause breakage of a line, leading to ignition or emission of smoke.



(I) Logic board ass'y wiring



(II) Paper feed motor side wiring



(5) Machine unit and bottom case unit assembly

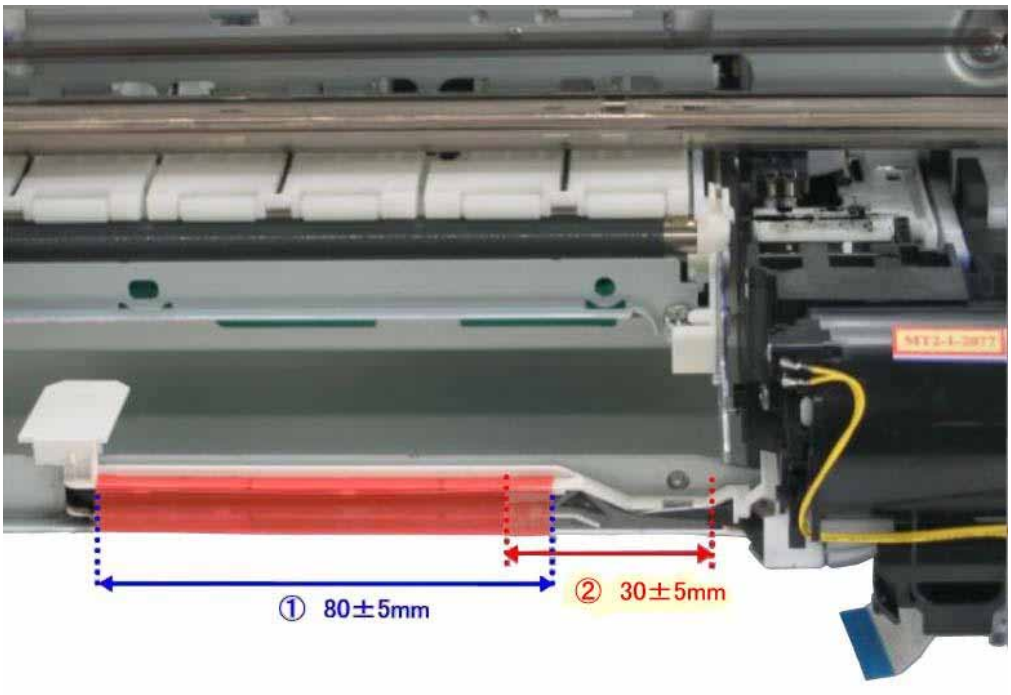
In assembling the machine unit chassis into the bottom case unit, **be cautious of the following points** to protect the waste ink tube from being pinched:

Platen unit (QM2-2202), purge unit (QM2-2208), waste ink tube (QC1-6548), waste ink tube holder (QC1-6460):

(I) At replacement, fix the waste ink tube to the machine chassis and waste ink tube holder with tape (at 2 locations).

If the tube is pinched and blocked, proper purging is prevented, resulting in ink leakage or strange noise.

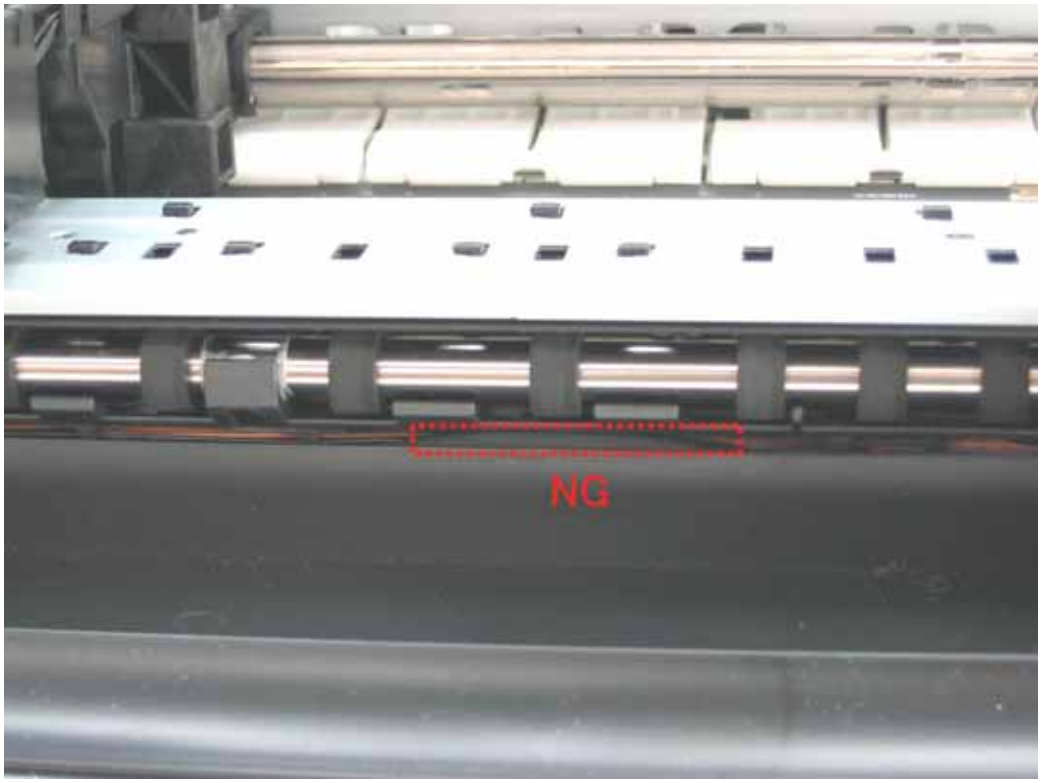
(No specific tape is specified. In the sample photo below, (1) is the orange tape, and (2) is a clear adhesive tape, such as Sellotape or Scotch tape.)



(II) After securing the waste ink tube with tape, be careful not to damage the tube in installing the machine unit chassis in the bottom case unit.

With the units assembled, the tube conditions are not visible. To confirm the tube is free from damage, perform the manual purging 3 or 4 times, and confirm that no strange noise is heard.

[Example: The tube is pinched and blocked as it is not fixed with tape.]



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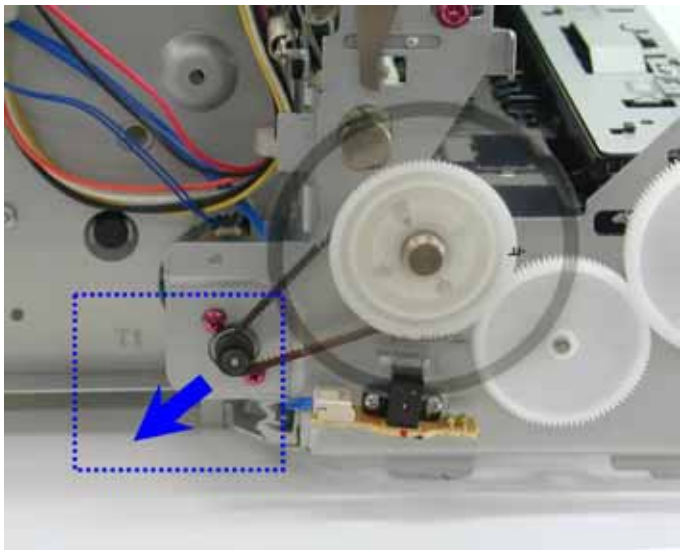
<Part 1: 3. REPAIR, 3-2>

3-3. Adjustment / Settings

(1) Paper feed motor adjustment

Perform the following adjustments when the paper feed motor unit is replaced:

1) When attaching the motor, fasten the screws so that the belt is properly stretched (in the direction indicated by the blue arrow in the figure below).
2) After replacement, be sure to perform the service test print, and confirm that no strange noise or faulty print operation (due to dislocation of the belt or gear, or out-of-phase motor, etc.) occurs.



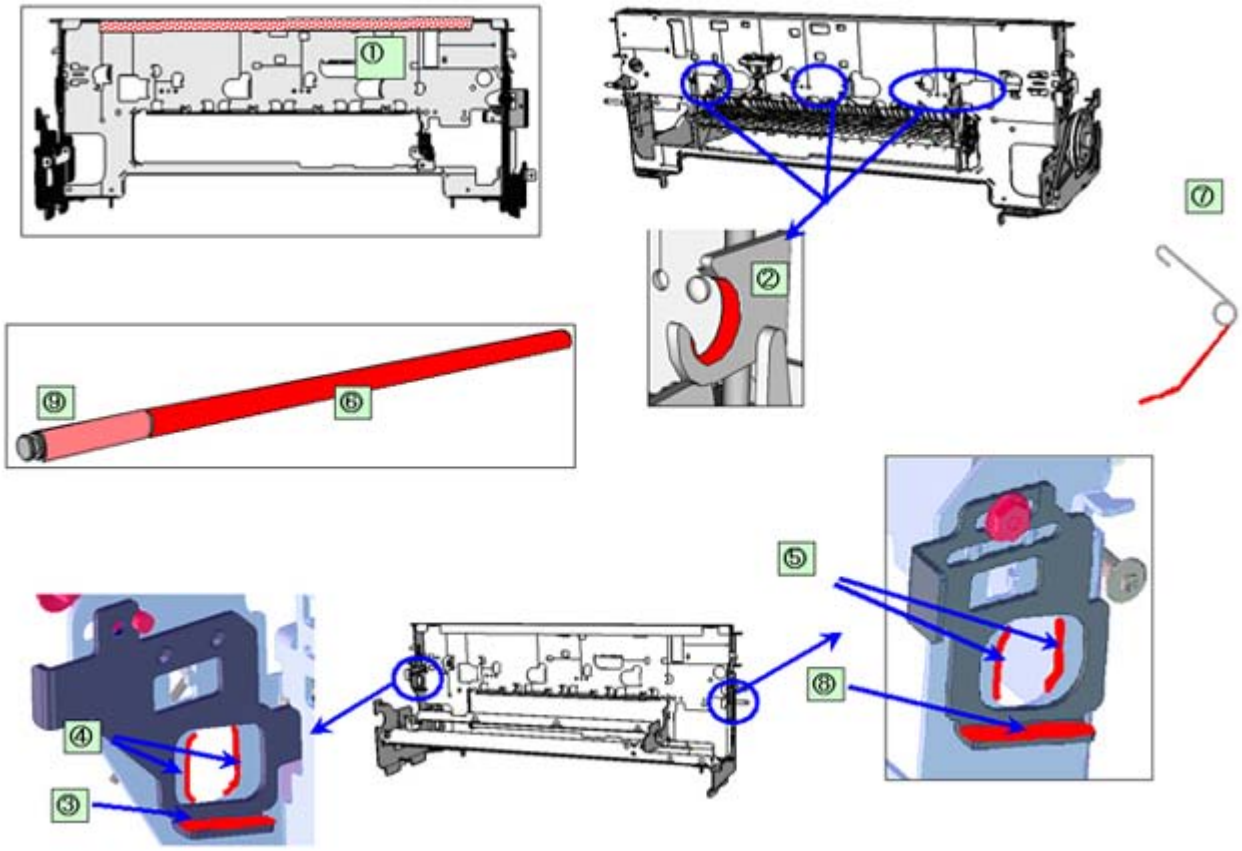
Note: The red screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit. DO NOT loosen them in other cases.

(2) Grease application

No	Part name		Where to apply grease / oil	Grease / oil name	Grease / oil amount	Number of drops*	Number of locations to apply grease / oil
1	Chassis Ass'y	(1)	Entire surface the carriage slider contacts	Floil KG107A	27 to 54 mg	3	1
2	Chassis Ass'y	(2)	PR lift shaft cam contact portion (at 3 locations)	Floil KG107A	9 to 18 mg	1	3
3	Adjust Plate L	(3)	Carriage shaft cam L sliding portion	Floil KG107A	18 to 36 mg	2	1
4	Chassis Ass'y	(4)	Carriage shaft sliding portion on the left side of chassis(at 2 locations)	Floil KG107A	9 to 18 mg	1	2
5	Chassis Ass'y	(5)	Carriage shaft sliding portion on the right side of chassis(at 2 locations)	Floil KG107A	9 to 18 mg	1	2
6	CR Shaft	(6)	Entire surface of the carriage shaft where the carriage unit	Floil	200 to 400		1

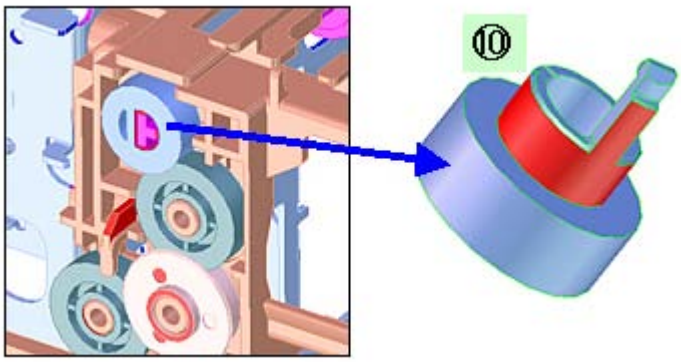
			slides	KG107A	mg		
7	CR Shaft Spring L	(7)	Carriage shaft sliding portion (to the end of the spring)	Floil KG107A	9 to 18 mg	1	1
8	Adjust Plate R	(8)	Carriage shaft cam R sliding portion	Floil KG107A	18 to 36 mg	2	1
9	CR Shaft	(9)	Carriage shaft surface where the carriage slides (and where machine-application of the grease is not feasible)	Floil KG107A	9 to 18 mg	1	1

* 1 drop=9 to 18 mg



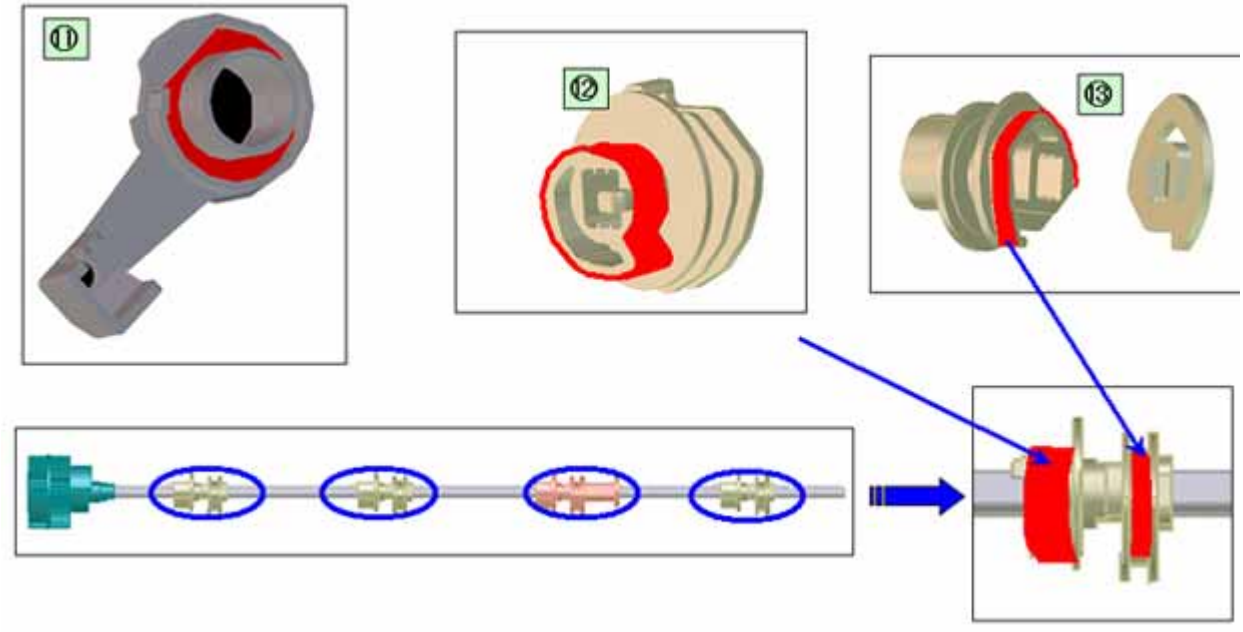
No	Part name		Where to apply grease / oil	Grease / oil name	Grease / oil amount	Number of drops*	Number of locations to apply grease / oil
10	CL input gear	(10)	Joint of the CL gear base	Floil KG107A	9 to 18mg	1	1

* 1 drop=9 to 18 mg



No	Part name		Where to apply grease / oil	Grease / oil name	Grease / oil amount	Number of drops*	Number of locations to apply grease / oil+H18
11	LF Roller Ass'y	(11)	LF roller bushing L spring contact	Floil KG107A	4.5 to 9 mg	1/2	1
12	PR Shaft Ass'y	(12)	PR spring sliding portion (at 4 locations)	Floil KG107A	9 to 18 mg	1	4
13	PR Shaft Ass'y	(13)	PR holder contact (at 4 locations)	Floil KG107A	13.5 to 27 mg	1.5	4

* 1 drop=9 to 18 mg



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<Part 1: 3. REPAIR, 3-3 (1) to (2)>

(3) Waste ink counter setting

When the logic board ass'y is replaced, reset the waste ink counter. In addition, according to the waste ink amount, replace the waste ink absorber (ink absorber kit). The standard amount for waste ink absorber replacement is given in the table below.

Waste ink amount*1	Ink absorber kit replacement
Less than 7%	Not required.
7% or more	Required.

*1: Check the waste ink amount by service test print or EEPROM information print.
[See 3.3. Adjustment / Settings, (5) Service mode, for details.]

(4) User mode

Function	Procedures	Remarks
Print head manual cleaning	- See "Standalone machine operation" below. - Also available from the MP driver Maintenance tab.	
Print head deep cleaning	- See "Standalone machine operation" below. - Also available from the MP driver Maintenance tab.	
Paper feed roller cleaning	See "Standalone machine operation" below.	
Nozzle check pattern printing	- See "Standalone machine operation" below. - Also available from the MP driver Maintenance tab.	
Automatic / manual print head alignment	- See "Standalone machine operation" below. - Also available from the MP driver Maintenance tab.	In Custom Settings of the MP driver Maintenance tab, manual print head alignment (by selecting the optimum values) as with the conventional models can be performed.
Bottom plate cleaning	- See "Standalone machine operation" below. - Also available from the MP driver Maintenance tab.	Cleaning of the platen ribs when the back side of paper gets smeared.
Print head replacement	The print head is replaceable at the same position as for ink tank replacement. (Open the scanning unit. When the carriage stops at the center, the print head can be replaced.)	

<Standalone machine operation>

1) With the machine turned on in the user mode, press the Menu button. Select Maintenance / Settings, proceed to Maintenance or Device Settings, then select a desired operation.

Operation	Remarks
Print head cleaning	
Nozzle check pattern printing	Set a sheet of plain paper (A4 or letter) in the ASF or the cassette (according to the Feed Switch button setting).
Print head deep cleaning	
Paper feed roller cleaning	

Automatic / manual print head alignment	Set a sheet of plain paper (A4 or letter) in the ASF.
Bottom plate cleaning	Fold a sheet of plain paper (A4 or letter) in half crosswise, then unfold and set it in the ASF with the folded ridge facing down.
Contrast adjustment	

(5) Service mode

Function	Procedures	Remarks
Service test print - Model name - Destination - ROM version - USB serial number - Waste ink amount - CD / DVD sensor correction value - Ink system function check result - CD / DVD sensor correction result	See "Service mode operation procedures" below.	Set a sheet of A4 or letter size paper. For print sample, see 3-4. Verification Items, (1) Service test print, <Service test print sample>.
EEPROM initialization	See "Service mode operation procedures" below.	The following items are NOT initialized, and the shipment arrival flag is not on: - USB serial number - Destination settings - Waste ink counter - CD / DVD correction value
Waste ink counter reset	See "Service mode operation procedures" below.	If the waste ink amount is 7% or more, replace the ink absorber kit.
Destination settings	See "Service mode operation procedures" below.	After destination settings, make sure to initialize the EEPROM.
Waste ink amount setting	See "Service mode operation procedures" below.	
Button and LCD test	See "Service mode operation procedures" below.	

Note: At the end of the service mode, press the ON/OFF button. To protect the media sensor from being dislocated during transportation, the paper lifting plate of the sheet feeder unit will be raised.

<Service mode operation procedures>

1) With the machine power turned off, while pressing the Stop/Reset button, press and hold the ON/OFF button. (DO NOT release the buttons. The COPY LED lights in green to indicate that a function is selectable.)
2) While holding the ON/OFF button, release the Stop/Reset button. (DO NOT release the ON/OFF button.)
3) While holding the ON/OFF button, press the Stop/Reset button 2 times, and then release both the ON/OFF and Stop/Reset buttons. (Each time the Stop/Reset button is pressed, the Alarm LED and COPY button light alternately, Alarm in orange and COPY in green, starting with Alarm LED.)
4) When the COPY button lights in green, press the Stop/Reset button the specified number of time(s) according to the function listed in the table below. (Each time the Stop/Reset button is pressed, the Alarm LED and COPY button light alternately, Alarm in orange and COPY in green, starting with Alarm LED.)

Time(s)	LED indication	Function	Remarks
0 times	Green (COPY)	Power off	When the print head is not installed, the carriage returns and locks in the home position capped.
1 time	Orange (Alarm)		See 3-4. Verification Items, (1) Service test

		Service test print	print.
2 times	Green (COPY)	EEPROM information print	See 3-4. Verification Items, (2) EEPROM information print.
3 times	Orange (Alarm)	EEPROM initialization	
4 times	Green (COPY)	Waste ink counter resetting	Once in the service mode: Press the On/Off button 2x after pressing the Stop button 4x.
5 times	Orange (Alarm)	Destination settings	After entering the destination settings mode, press the Stop/Reset button the specified number of time(s) to select the destination. For detail, see "Destination settings procedures" below.
6 times	Green (COPY)	Print head deep cleaning	(Cleaning of both black and color)
7 times	Orange (Alarm)	Reserved	
8 times	Green (COPY)	CD / DVD check pattern print	Not used in servicing
9 times	Orange (Alarm)	CD / DVD print position correction (horizontal: X direction)	Not used in servicing.
10 times	Green (COPY)	CD / DVD print position correction (vertical: Y direction)	Not used in servicing.
11 times	Orange (Alarm)	Button and LCD test	
12 and 13 times	Green, Orange (COPY, Alarm)	Return to the menu selection	
14 times	Green (COPY)	Left margin correction	Not used in servicing.
15 times	Orange (Alarm)	Waste ink amount setting	
16 times or more		Return to the menu selection	

Note: - If the Stop/Reset button is pressed 16 or more times, the Alarm LED (orange) or COPY button (green) lights steadily without any changes.

- At the end of the service mode, press the ON/OFF button. To protect the media sensor from being dislocated during transportation, the paper lifting plate of the sheet feeder unit will be raised.

<Destination settings procedures>

In the destination settings mode, press the Stop/Reset button the specified number of time(s) according to the destination listed in the table below, and press the ON/OFF button.

Time(s)	LED indication	Destination	CD / DVD print
0 times	Green (COPY)	No change of the destination	
1 time	Orange (Alarm)	Japan	Supported
2 times	Green (COPY)	Korea	Not supported
3 times	Orange (Alarm)	US	Not supported
4 times	Green (COPY)	Europe	Supported
5 times	Orange (Alarm)	Australia	Supported
6 times	Green (COPY)		

		Asia	Supported
7 times	Orange (Alarm)	China	Supported
8 times	Green (COPY)	Taiwan	Supported
9 times or more	Orange (Alarm)	Return to the menu selection	

Note: After setting the destination, be sure to initialize the EEPROM. The destination setting may not be valid unless the EEPROM is initialized after destination settings.

Confirm the model name and destination in service test print or EEPROM information print. [See 3.4. Verification Items, (1) Service test print, or (2) EEPROM information print.]

<Waste ink amount setting procedures>

Set the waste ink amount data to a replaced new EEPROM after the logic board is replaced in servicing.

1) Before replacement of the logic board ass'y, check the waste ink amount (0% to 100%) in EEPROM information print. [See 3.4. Verification Items, (2) EEPROM information print.]

2) In the waste ink amount setting mode, press the Stop/Reset button the specified number of time(s) according to the waste ink absorber whose value should be transferred to the replaced new EEPROM. (Only the main waste ink absorber for the MP500)

Time(s)	Waste ink absorber	Remarks
0 times	Main waste ink absorber	
1 time	Platen waste ink absorber	Not valid for the MP500
2 times	Both the main and platen waste ink absorbers	Only the main waste ink absorber is valid for the MP500
3 times or more	Not valid	Press the ON/OFF button to return to the waste ink amount setting mode.

3) Press the ON/OFF button to proceed to the next step.

4) The waste ink amount can be set in 10% increments by pressing the Stop/Reset button. Press the Stop/Reset button the appropriate number of time(s) to select the value which is closest to the actual waste ink amount.

Time(s)	Waste ink amount value to be set (%)
0 times	0%
1 time	10%
2 times	20%
3 times	30%
4 times	40%
5 times	50%
6 times	60%
7 times	70%
8 times	80%
9 times	90%
10 times or more	Not valid. Press the ON/OFF button to return to the waste ink amount setting mode.

5) Press the ON/OFF button to set the selected value to the EEPROM. Print EEPROM information to confirm that the value is properly set to the EEPROM.

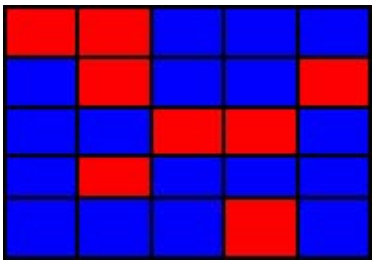
<Button and LCD test procedures>

Purpose:

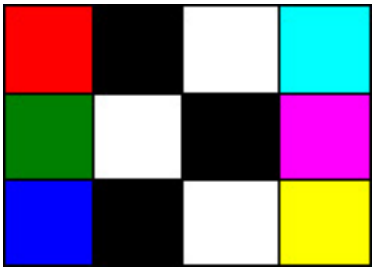
To confirm the operation after replacement of the operation panel unit, logic board, or LCD.

Procedures:

1) Press the Stop/Reset button. The LCD self test is done. (If an error occurs, the Alarm LED lights.
2) Press each button (total 19 buttons) on the operation panel.
3) If 2 or more buttons are pressed at the same time, only 1 button is accepted.
   The LCD is divided into 19 blue segments, representing each button. The color of a segment corresponding to the pressed button changes to red.



4) When all the buttons are pressed, the entire LCD changes to a full red screen.
   Open the scanning unit (printer cover) to display the color pattern.
   If any one of the keys is not pressed (a blue segment is left), pressing the Stop/Reset button is not accepted (nothing occurs).



5) Press the ON/OFF button to return to the service mode menu selection.

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<Part 1: 3. REPAIR, 3-3 (3) to (5)>

3-4. Verification Items

(1) Service test print

<EEPROM information contents>

On the service test print (sample below), confirm the EEPROM information as shown below. (The information is given in the upper portion of the printout.)

MP500: Model name

JPN: Destination

Vx.xx: ROM version

USB (xxxxxx): USB serial number

FA = xx xx xx: Reserved for plant use

D = xxx.x: Waste ink amount (%)

CDR (+xxxxx, +yyyyy): CD / DVD sensor position correction value

AB (K = OK Y = ...): Ink system check result

<Print check items>

On the service test print (sample below), confirm the following items:

- Check 1, top of form accuracy: The lines shall not extend off the paper.

- Check 2, EEPROM information

- Check 3, nozzle check pattern: Ink shall be ejected from all nozzles.

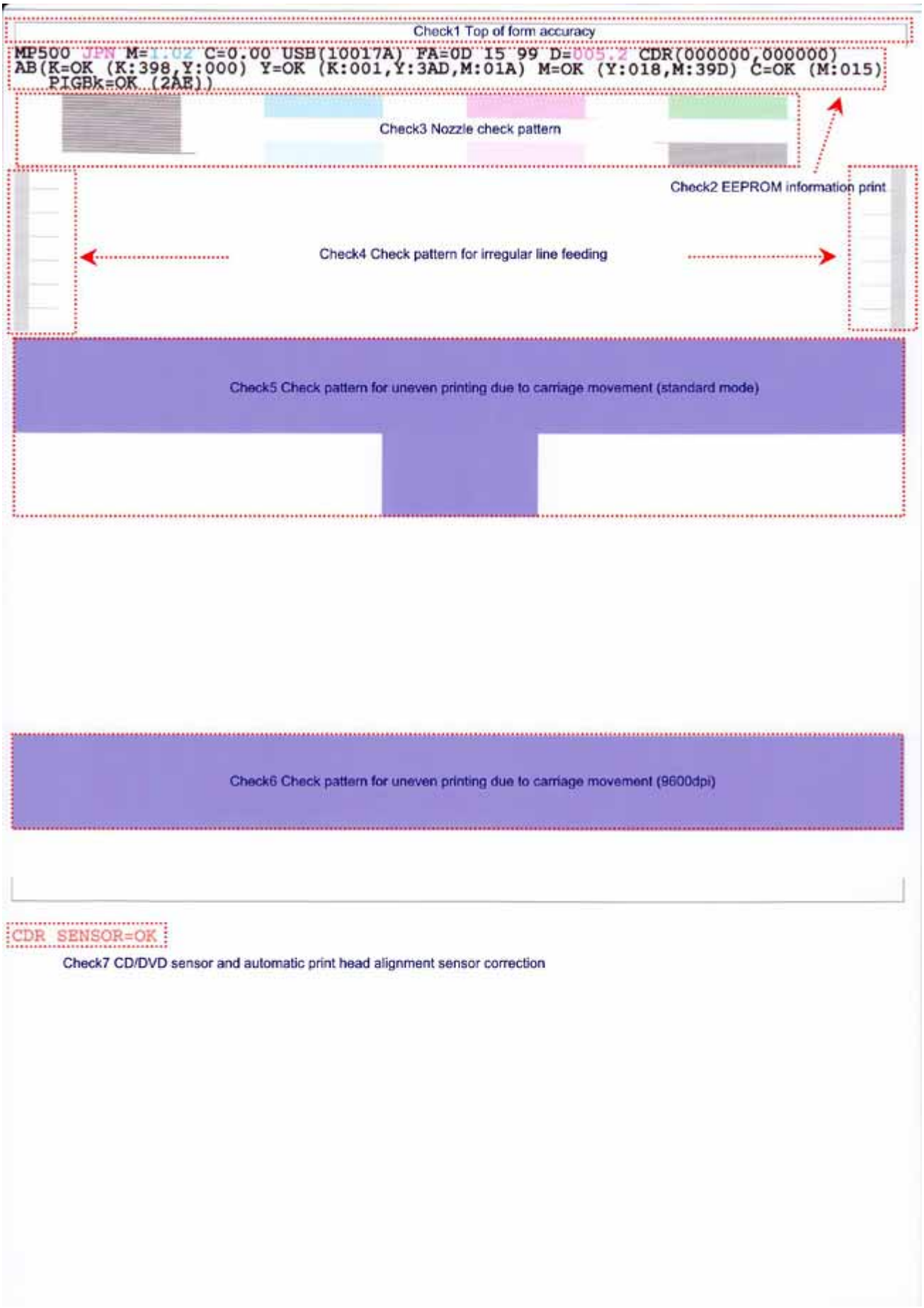
- Check 4, check pattern for irregular line feeding: There shall be no remarkable streaks or unevenness.

- Check 5, check pattern for uneven printing due to carriage movement (standard mode): There shall be no remarkable unevenness.

- Check 6, check pattern for uneven printing due to carriage movement (9600 dpi mode): There shall be no remarkable unevenness.

- Check 7, CD / DVD sensor and automatic print head alignment sensor correction: The results shall be OK.

<Service test print sample>


Check1 Top of form accuracy
MP500 JPN M=1.02 C=0.00 USB(10017A) FA=0D 15 99 D=005.2 CDR(000000,000000)
AB(K=OK (K:398,Y:000) Y=OK (K:001,Y:3AD,M:01A) M=OK (Y:018,M:39D) C=OK (M:015)
PIGBk=OK (2AE))
Check3 Nozzle check pattern
Check2 EEPROM information print
Check4 Check pattern for irregular line feeding
Check5 Check pattern for uneven printing due to carriage movement (standard mode)
Check6 Check pattern for uneven printing due to carriage movement (9600dpi)
CDR SENSOR=OK
Check7 CD/DVD sensor and automatic print head alignment sensor correction

(2) EEPROM information print

<How to read EEPROM information print>

Print sample:

MP500 JPN V1.02 IF(USB2=1) D=004.5 ST=2005/06/27-18:30
ER(ER0=1000 ER1=5100) LPT=2005/07/09-09:09
PC(M=002 R=000 T=001 D=009 C=000)
CLT(BK=2005/06/28-18:30 CL=2005/07/01-18:30)
CH=00002 CT(PBK=012 BK=015 Y=013 M=001 C=001) IS(PBK=0 BK=0 Y=0 M=0 C=0)
P_ON(S=00009) A_REG=1 M_REG=0
UR(A(BKoe)=-01 B(Coe)=-02 C(Moe)=-02 D(SCoe)=+01 E(SMoe)=+01 F(PBKoe)=-02
G(CLbi)=000 H(SCLbi)=+01 I(C-SC)=-01 J(M-SM)=-01 K(BK-CL)=+01
L(BKbiPP)=000 M(CLbiPP)=000 N(SCLbiPP)=000 O(NZctr)=000 P(NZedge)=000

WP=0024 CDIN(LG=001 PB=000 OPB=000) BTIN=1 MSD(002)
TPAGE=00162 (TTL=00162 COPY=00000)
PAGE(All=00142 PP=00140 HR+MP=00000 PR+SP+SG=00002 GP=00000 PC=00000 EV=00000)
UCPAGE(All=00020 PP=00013 HR+MP=00000 PR+SP+SG=00007 GP=00000 PC=00000 EV=00000)
BPPAGE(All=00000 BSSP=00000 PC=00000)
CDPAGE(All=00000) EDGE=00009 L=00008 BTPAGE=0000 CDR=00000
CDRP=(000000,000000) CDRS=(000) LM=(ASF_R:00 UT_F:00 UT_R:00)
<Direct>
LG=01 Japanese SC=000 PrnB=000 Seal=000 CDI=007 CDP=002
CDD-PR(L=000 2L=000 PC=000 A4=000) CDD-SP(L=000 2L=000 PC=000 A4=000)
CDD-MP(L=000 2L=000 PC=000 A4=000) DCD-PP(L=000 2L=000 PC=000 A4=000)
DCD-FPP(L=000 2L=000 PC=000 A4=000) DCD-MPP(L=000 2L=000 PC=000 A4=000)
<Scanner>
SC=00005
SC-dpi(75=00000 150=00000 300=00005 600=00000 1200=00000 2400=00000 4800=00000)
SG(GY=00003 CL=00002)
<Copy>
MCASF(PP=00000 SP+PR+GP=00000 OTH=00000)
MCUF(PP=00000 SP+PR+GP =00000 OTH=00000)
CCASF(PP=00000 HR+MP=00000 PR+SP+SG=00000 GP=00000 PC=00000)
CCUT(PP=00000 HR+MP=00000 PR+SP+SG =00000 GP=00000 PC=00000)

Head TempBK=38.5 Head TempC=34.5 Env Temp=33.5 FF(99 15 0D)

HDEEPROM
V0001 SN=0000-0436
LN(00000 00000 00000 00003 00013 00017 00015) ID=08
IL=(PBK=000 BK=000 Y=000 M=000 M2=000 C=000 C2=000)

<SCAN ERROR HISTORY>
0000 0000

Printed items:

1. Model name 2. ROM version 3. Connected I/F (USB2) 4. Waste ink amount 5. Installation date

6. Operator call/service call error record 7. Last printing time

8. Purging count (manual/deep cleaning/timer/dot count/ink tank and print head replacement)

9. Cleaning time

10. Print head replacement count 11. Ink tank replacement count (PBK/BK/Y/M/C) 12. Ink status (PBK/BK/Y/M/C)

13. Power-on count (soft) 14. Automatic print head alignment by user 15. Manual print head alignment by user

16. User print head alignment values (Bkoe/Coe/Moe/SCoe/SMoe/PBKoe/CLbi/SCLbi/C-SC/M-SM/BK-CL/BKbiPP/CLbiPP/SCLbiPP/NZctr/NZedge)

17. Wiping count 18. Camera Direct Print-supported device connection record (Canon legacy, Canon PictBridge, Competitor PictBridge) 19. Bluetooth-supported device connection record 20. Longest period where printing stops

21. Total print pages (total, copy pages)

22. ASF feed pages (total, plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard, Envelope)

23. U-turn cassette feed pages (total, plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard, envelope)

24. Auto duplex print pages (total, Photo Paper Plus Double Sided, postcard)

25. Camera Direct print pages (total) 26. Borderless print pages (total) 27. 4x6 print pages 28. Print pages via Bluetooth communication 29. Number of CDs and DVDs printed

30. CD / DVD print position adjustment value 31. CD / DVD sensor correction value 32. Left margin correction value (ASF back side, U-turn front side, U-turn back side)

<Direct>

33. Language 34. Business card & Credit card sized paper pages fed 35. Print Beam feed pages 36. Sticker sheets fed 37. Memory card use count 38. Total Card Direct print pages

39. Card Direct print pages: Photo Paper Pro (4 x 6, 5 x 7, Japanese post card, Letter) 40. Card Direct print pages: Photo Paper Plus Glossy (4 x 6, 5 x 7, Japanese post card, Letter)

41. Card Direct print pages: Matte Photo Paper (4 x 6, 5 x 7, Japanese post card, Letter) 42. Camera Direct print pages: Photo Paper (4 x 6, 5 x 7, Japanese post card, Letter)

43. Camera Direct print pages: Fast Photo Paper (4 x 6, 5 x 7, Japanese post card, Letter) 44. Camera Direct print pages: Matte Photo Paper (4 x 6, 5 x 7, Japanese post card, Letter)

<Scanner>

45. Total scan count

46. Scan count by scanning resolution (75, 150, 300, 600, 1200, 2400, 4800 dpi)

47. Scan count by scanning gradation (grayscale, color)

<Copy>

48. Monochrome copy pages fed via the ASF (plain paper, Photo Paper Plus Glossy & Photo Paper Pro & Glossy Photo Paper, other)

49. Monochrome copy pages fed via the U-turn cassette (plain paper, Photo Paper Plus Glossy & Photo Paper Pro & Glossy Photo Paper, other)

50. Color copy pages fed via the ASF (plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard)

51. Color copy pages fed via the U-turn cassette (plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard)

52. Print head temperature (chip 0: PBK/BK, chip 1: C/M/Y) 53. Inside temperature 54. Line inspection information

HDEEPROM

55. Version 56. Serial number

57. Lot number 58. Print head ID

59. Ink ejection level (PBK, BK, Y, M, M2, C, C2)

<Scan error history>

60. Scanner error status record (the last 2 errors, including user errors and scan errors during copying; consecutive same errors are recorded individually)

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<Part 1: 3. REPAIR, 3-4>

4. MACHINE TRANSPORTATION

This section describes the procedures for transporting the machine for returning after repair, etc.

1) In the service mode, press the ON/OFF button to finish the mode, and confirm that the paper lifting plate of the sheet feed unit is raised.

2) Keep the print head and ink tanks installed in the carriage.
[See Caution 1 below.]

3) Turn off the machine to securely lock the carriage in the home position. (When the machine is turned off, the carriage is automatically locked in place.)
[See Caution 2 below.]

Caution:

(1) If the print head is removed from the machine and left alone by itself, ink is likely to dry. For this reason, keep the print head installed in the machine even during transportation.

(2) Securely lock the carriage in the home position, to prevent the carriage from moving and applying stress to the carriage flexible cable, or causing ink leakage, during transportation.

Memo:

If the print head must be removed from the machine and transported alone, perform the following:

(1) Attach the protective cap (used when the packing was opened) to the print head (to protect the print head face from damage due to shocks).

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<Part 1: 4. MACHINE TRANSPORTATION>

Part 2

TECHNICAL REFERENCE

1. NEW TECHNOLOGIES

(1) New ink tank system (PGI-5, CLI-8)

An LED is installed in each ink tank.

By the LED indication, wrong installation of the ink tanks will be prevented, and the remaining ink level can be visually recognized with the ink tanks seated in the carriage.

The combination of the new pigment-based black ink with higher resistance against bleeding or marker pens and the new dye-based inks with higher photo quality and weather resistance makes the new ink system strong in both photo and text printing.

(2) Super-photo quality printing

By the FINE technologies, 1 pl of ultra-fine ink droplet is adopted. The MP500 provides excellent super-photo print quality without graininess at the maximum resolution of 9,600 dpi x 2,400 dpi[*1], which is equal to that of a 6-color machine.

*1: Printing at the minimum distance of 1/9600 inch between the dots.

(3) Print / copy speed

- Print speed:

  Approx. 51 sec. in 4 x 6 borderless printing (standard mode, Photo Paper Plus Glossy, full page, SCID No.2)

  For reference, 29 ppm in monochrome printing and 19 ppm in color printing

- Copy speed:

  29 cpm in monochrome copy and 19 cpm in color copy

(4) New functionality in Direct Printing

- Plain paper is now usable in Camera Direct Printing from a digital camera or digital video camera, if both support PictBridge.
- File numbers can be printed on the images.
- Optimization of photos taken by a mobile phone:

  Minimizes jaggies in printing a low-resolution photo taken by a mobile phone.

- Writing to a memory card:

  From the Maintenance/settings menu, the memory card can be set to the Read-only or Read/write mode.

- Slide show:

  To the Single-photo print menu, the slide show function has been added to display photos from the memory card one by one automatically.

(5) Compact and stylish design

Stylish design offering the unification of the compact body and the operation panel has been adopted (a thin scanner, CIS, is adopted).

The paper output tray consists of 4 slides (contributing to increase of the paper ejection speed).

(6) USB 2.0 Hi-Speed supported

The machine supports USB 2.0 Hi-Speed, enabling high speed data transfer in use with the computer, OS, and USB hub.

(7) High-definition 2.5 color STN LCD

The 2.5 color STN LCD offers higher visibility than the conventional models to improve usability (176 x 132 pixels, approx. 65,000 colors).

(8) 1,200 x 2,400 dpi high-resolution CIS scanner

(9) Printing via Bluetooth communication (optional)

The Bluetooth Unit BU-20 is available as an option.

Adopting a compatible USB adapter, the BU-20, when attached to the machine, enables wireless printing from a Bluetooth-compliant computer or mobile phone.

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<Part 2: 1. NEW TECHNOLOGIES>

2. CLEANING MODE AND AMOUNT OF INK PURGED

To prevent printing problems due to bubbles, dust, or ink clogging, print head cleaning is performed before the start of printing (when the cleaning flag is on), except in the following cases:

- Cleaning on arrival: Performed when the scanning unit (printer cover) is closed.
- Manual cleaning / deep cleaning: Performed manually.

<Cleaning mode list>

Black: Pigment-based black

Color: Dye-based black, cyan, magenta, yellow

Condition	Details	Amount of ink used (g) (in the normal temperature/humidity environment)	Est. required time (sec.) (not including the time of opening the caps)
On arrival of the machine (All in sequence)	First to third cleaning after shipped from the plant.	0.45 (Black) 1.50 (Color)	88
Dot count cleaning (Black)	When the specified number of dots are printed since the previous Black cleaning.	0.14 (Black)	35 (Black)
Timer cleaning - 0[*1] (Black only)	If 24 to 60 hours have elapsed since the previous Black cleaning till the start of the next printing.	0.14 (Black)	35 (Black)
Timer cleaning - 1 (Black only)	If 60 to 96 hours have elapsed since the previous Black cleaning till the start of the next printing.		
Timer cleaning - 2 (Black only)	If 96 to 120 hours have elapsed since the previous Black cleaning till the start of the next printing.		
Timer cleaning - 3[*2] (Black/Color)	If 120 to 336 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	0.14 (Black) 0.50 (Color)	35 (Black) 40 (Color)
Timer cleaning - 4 (All in sequence)	If 336 to 504 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	0.45 (Black) 1.00 (Color)	70
Timer cleaning - 5 (All in sequence)	If 504 to 720 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.		70
Timer cleaning - 6 (All in sequence)	If 720 to 1,080 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.		70
Timer cleaning - 7 (All in sequence)	If 1,080 to 2,160 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	0.78 (Black) 1.00 (Color)	70
Timer cleaning - 8 (All in sequence)	If 2,160 to 4,320 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	1.58 (Black) 1.00 (Color)	80
Timer cleaning - 9 (All in sequence)	If 4,320 to 8,640 hours have elapsed since the previous Black/Color cleaning till the	1.58 (Black) 1.00 (Color)	80

	start of the next printing.		
Timer cleaning - 10 (All in sequence)	If 8,640 or longer hours have elapsed since the previous Black/Color cleaning till the start of the next printing.		80
At print head replacement (All in sequence)	When the print head is removed and installed.	0.45 (Black) 1.50 (Color)	88
At ink tank replacement*3 (Black/Color/All in sequence)	When an ink tank is replaced (without the print head removal or re-installation)	0.30 (Black) 1.00 (Color)	70 (All in sequence) 35 (Black) 60 (Color)
Manual cleaning (Black/Color/All at the same time)	- Via the operation panel (All at the same time only) - Via the MP driver (Selectable from Black, Color, or All at the same time)	0.14 (Black) 0.50 (Color)	45 (All at the same time) 35 (Black) 40 (Color)
Deep cleaning (Black/Color/All at the same time)	Via the MP driver (Selectable from Black, Color, or All at the same time)	1.58 (Black) 1.00 (Color)	80 (All at the same time) 45 (Black) 55 (Color)
If the print head has not been capped before power-on (All in sequence)		0.30 (Black) 1.00 (Color)	70 (All in sequence)

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<Part 2: 2. CLEANING MODE AND AMOUNT OF INK PURGED>

3. PRINT MODE

3-1. Resolution

Default setting

Selectable in the MP driver Main tab (including settings for the operation panel or camera in Dire

Selectable after clicking Custom in the Main tab

Ink used: PigBk: PGI-5BK
C: CLI-8C
M: CLI-8M
Y: CLI-8Y
k: CLI-8BK

(1) Normal color printing

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 |
|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | **Custom**
PigBK: 300 x 300, C/M/Y: 300 x 300
1 pass, Bi-directional
PigBk/C/M/Y | **Fast**
PigBK: 300 x 300, C/M/Y: 300 x 300
1 pass, Bi-directional
PigBk/C/M/Y | **Standard**
PigBK: 600 x 600, C/M/Y: 1200 x 1200
1 pass, Bi-directional
PigBk/C/M/Y | **High**
PigBK: 600 x 600, C/M/Y: 1200 x 1200
4 passes, Bi-directional
PigBk/C/M/Y | |
| Photo Paper Pro
PR-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | **Custom**
C/M/Y/c/m/k: 9600 x 2400
16 passes, Bi-directional
C/M/Y/c/m/k |
| Photo Paper Plus Glossy
Photo Paper Plus Semi-gloss
PP-101/SG-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | **Fast**
C/M/Y/c/m/k: 1200 x 2400
3 passes, Bi-directional
C/M/Y/c/m/k | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Matte Photo Paper
MP-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Glossy Photo Paper
GP-401/501 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Photo Paper Plus Double Sided
PP-101D | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| High Resolution Paper
HR-101S | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Envelope | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
PigBk/Y: 600 x 600, C/M/k: 1200 x 1200
2 passes, Bi-directional
PigBk/C/M/Y/k | **High**
PigBk/Y: 600 x 600, C/M/k: 1200 x 1200
4 passes, Bi-directional
PigBk/C/M/Y/k | |
| Transparency
CF-102 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
PigBk: 600 x 600, C/M/Y/k: 1200 x 1200
4 passes, Bi-directional
PigBk/C/M/Y/k | **High**
PigBk: 600 x 600, C/M/Y/k: 1200 x 1200
6 passes, Bi-directional
PigBk/C/M/Y/k | |
| T-shirt transfer
TR-301 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **High**
C/M/Y/k: 1200 x 1200
6 passes, Bi-directional
C/M/Y/k | | |
| CD-R (recommended) | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Fast**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **Standard**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
8 passes, Bi-directional
C/M/Y/c/m/k |
| CD-R (other) | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Fast**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **Standard**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
8 passes, Bi-directional
C/M/Y/c/m/k |
| Other Photo Paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
8 passes, Bi-directional
C/M/Y/c/m/k | | |

(2) Grayscale printing

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 |
|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | **Custom**
PigBk: 300 x 300
1 pass, Bi-directional
PigBk | **Fast**
PigBk: 300 x 300
1 pass, Bi-directional
PigBk | **Standard**
PigBk: 600 x 600
1 pass, Bi-directional
PigBk | **High**
PigBk: 600 x 600
4 passes, Bi-directional
PigBk | |
| Envelope | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
PigBk: 600 x 600
2 passes, Uni-directional
PigBk | **High**
PigBk: 600 x 600
4 passes, Uni-directional
PigBk | |

(3) Borderless printing

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 |
|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
Y: 600 x 600, C/M/k: 1200 x 1200
2 passes, Bi-directional
C/M/Y/k | | |
| Photo Paper Pro
PR-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | **Custom**
C/M/Y/c/m/k: 9600 x 2400
16 passes, Bi-directional
C/M/Y/c/m/k |
| Photo Paper Plus Glossy
Photo Paper Plus Semi-gloss
PP-101/SG-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | **Fast**
C/M/Y/c/m/k: 1200 x 2400
3 passes, Bi-directional
C/M/Y/c/m/k | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Matte Photo Paper
MP-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Glossy Photo Paper
GP-401/501 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Photo Paper Plus Double Sided
PP-101D | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |
| Other Photo Paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
8 passes, Bi-directional
C/M/Y/c/m/k | | |

(4) Duplex printing

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 |
|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | **Custom**
PigBk: 300 x 300, C/M/Y: 600 x 600
1 pass, Bi-directional
PigBk/C/M/Y | **Fast**
PigBk: 300 x 300, C/M/Y: 300 x 300
1 pass, Bi-directional
PigBk/C/M/Y | **Standard**
PigBk: 600 x 600, C/M/Y: 1200 x 1200
1 pass, Bi-directional
PigBk/C/M/Y | **High**
PigBk: 600 x 600, C/M/Y: 1200 x 1200
4 passes, Bi-directional
PigBk/C/M/Y | |
| Photo Paper Plus Double Sided
PP-101D | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | |

(5) Camera Direct printing

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 | Camera Direct Printing mode |
|---|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | | **Standard on the operation panel**
PigBk: 600 x 600, C/M/Y/c/m: 1200 x 2400
4 passes, Bi-directional
PigBk/C/M/Y/c/m | | **High on the operation panel**
PigBk: 600 x 600, C/M/Y/c/m: 1200 x 24
6 passes, Bi-directional
PigBk/C/M/Y/c/m |
| Photo Paper Pro
PR-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | | |
| Photo Paper Plus Glossy
Photo Paper Plus Semi-gloss
PP-101/SG-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | | |

(6) Copying

Monochrome copy on one side of paper:

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 | Copy mode |
|---|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | **Fast on the operation panel**
PigBk: 300 x 300
1 pass, Bi-directional
PigBk | | **Standard on the operation panel**
PigBk: 600 x 600
1 pass, Bi-directional
PigBk | **High on the operation panel**
PigBk: 600 x 600
4 passes, Bi-directional
PigBk | | |

Color copy on one side of paper:

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 | Copy mode |
|---|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | **Fast on the operation panel**
PigBk: 300 x 300, C/M/Y: 300 x 300
1 pass, Bi-directional
PigBk/C/M/Y | | **Standard on the operation panel**
PigBk/Y: 600 x 600, C/M: 1200 x 1200
1 pass, Bi-directional
PigBk/C/M/Y | **High on the operation panel**
PigBk: 600 x 600, C/M/Y/c/m: 1200 x 2400
4 passes, Bi-directional
PigBk/C/M/Y/c/m | | |

Color / Monochrome copy on one side of paper:

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 | Copy mode |
|---|---|---|---|---|---|---|---|
| Photo Paper Pro
PR-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | | | **High on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k |
| Photo Paper Plus Glossy
Photo Paper Plus Semi-gloss
PP-101/SG-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | | |
| Matte Photo Paper
MP-101 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | | |
| Glossy Photo Paper
GP-401/501 | Print quality
Resolution H x V (dpi)
Print control
Ink used | | | **Standard on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
4 passes, Bi-directional
C/M/Y/c/m/k | **High on the operation panel**
C/M/Y/c/m/k: 1200 x 2400
6 passes, Bi-directional
C/M/Y/c/m/k | | |

Color / Monochrome copy on both sides of paper:

| Paper type \ MP driver Custom setting | | Fast
5 | <-
4 | 3 | ->
2 | Fine
1 | Copy mode |
|---|---|---|---|---|---|---|---|
| Plain paper | Print quality
Resolution H x V (dpi)
Print control
Ink used | **Fast on the operation panel**
PigBk: 300 x 300, C/M/Y: 300 x 300
1 pass, Bi-directional
PigBk/C/M/Y | | **Standard on the operation panel**
PigBk/Y: 600 x 600, C/M: 1200 x 1200
1 pass, Bi-directional
PigBk/C/M/Y | **High on the operation panel**
PigBk: 600 x 600, C/M/Y/c/m: 1200 x 2400
4 passes, Bi-directional
PigBk/C/M/Y/c/m | | |

(7) Card Direct printing

Paper type \ MP driver Custom setting		Fast 5	 4	 3	 2	Fine 1	Card Direct Printing mode
Plain paper	Print quality Resolution H x V (dpi) Print control Ink used				**Standard on the operation panel** PgBK: 600 x 600, C/M/Y/c/m: 1200 x 2400 4 passes, Bi-directional PgBk/C/M/Y/c/m		**High on the operation panel** PgBk: 600 x 600, C/M/Y/c/m: 1200 x 24 6 passes, Bi-directional PgBk/C/M/Y/c/m
Photo Paper Pro PR-101	Print quality Resolution H x V (dpi) Print control Ink used			**Standard on the operation panel** C/M/Y/c/m/k: 1200 x 2400 4 passes, Bi-directional C/M/Y/c/m/k	**High on the operation panel** C/M/Y/c/m/k: 1200 x 2400 6 passes, Bi-directional C/M/Y/c/m/k		
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss PP-101/SG-101	Print quality Resolution H x V (dpi) Print control Ink used			**Standard on the operation panel** C/M/Y/c/m/k: 1200 x 2400 4 passes, Bi-directional C/M/Y/c/m/k	**High on the operation panel** C/M/Y/c/m/k: 1200 x 2400 6 passes, Bi-directional C/M/Y/c/m/k		
Matte Photo Paper MP-101	Print quality Resolution H x V (dpi) Print control Ink used			**Standard on the operation panel** C/M/Y/c/m/k: 1200 x 2400 4 passes, Bi-directional C/M/Y/c/m/k	**High on the operation panel** C/M/Y/c/m/k: 1200 x 2400 6 passes, Bi-directional C/M/Y/c/m/k		
Glossy Photo Paper GP-401/501	Print quality Resolution H x V (dpi) Print control Ink used			**Standard on the operation panel** C/M/Y/c/m/k: 1200 x 2400 4 passes, Bi-directional C/M/Y/c/m/k	**High on the operation panel** C/M/Y/c/m/k: 1200 x 2400 6 passes, Bi-directional C/M/Y/c/m/k		

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<Part 2: 3. PRINT MODE>

4. FAQ (Problems Specific to the MP500 and Corrective Actions)

No.	*	Function	Phenomenon	Condition	Cause	Corrective action	Possible call or complaint
1	B	Print results	Skewed paper feeding	- Paper feeding from the cassette, Photo Paper Plus Double Sided, 5 x 7 size	Due to its mechanism, contact of the PF pinch rollers to the 5 x 7 size paper is uneven, which is likely to cause skewed paper feeding.	Change the paper feeding method from the cassette to the auto sheet feeder.	- Paper feeds at an angle. - A margin appears on printouts.
2	B	Paper feed	Improper paper feeding: - Multi-feeding - Skewed paper feeding - Paper jam	- Paper feeding from the ASF - Plain paper - Highest print speed (Custom setting to 5) - In the high temperature and high humidity environment - In the low temperature and low humidity environment - With the maximum amount of paper set (13 mm)	In the high temperature and high humidity environment, paper becomes wavy; in the low temperature and low humidity environment, paper curls significantly. When the maximum amount of paper is set in the ASF, and if the paper-return tab fits in a wave or curl of the paper, the tab slips and does not catch paper properly, causing paper feed problems.	- Reduce the amount of paper set in the ASF to half (approx. 5 mm high).	- Multiple sheets of paper feed at the same time. - Paper feeds at an angle. - A paper jam occurs.
3	C	Print results	Skewed paper feeding (at the level of +/- 1%)	- Paper feeding from the ASF - Credit Card size	Since coaxial tolerance between the pinch roller and the LF roller, which determines the paper feed alignment, is 0.2mm, skewed paper feeding can occur. However, according to the field data of current models, the skewness level caused by the coaxial tolerance of 0.2mm is within the criteria of +/- 1%, thus the phenomenon is left as is.	- Align the paper guide to the paper edge tighter than usual.	- Paper feeds at an angle. - A margin appears on printouts.
			Soiling on the back side of paper (lines or streaks parallel to the paper feed direction)	- After continuous borderless printing of small sized paper (such as 4 x 6), when a larger sized paper (such as A4) is printed.	In borderless printing, printing is performed to the size slightly larger than the paper size, and ink off the paper is absorbed	1. Perform Bottom plate cleaning (from the MP driver) up to 3 times[*1]. 2. If soiling on the paper still	- Paper gets smeared. - The back side of paper gets smeared.

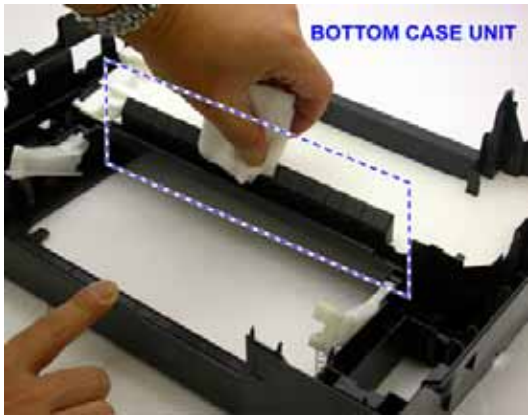
4	A	Print results		- With Photo Paper Plus Double Sided or postcards, the phenomenon is likely to be noticeable and to be complained of by users, as printing is performed on both sides of such paper.	by the platen's ink absorber. Absorbed ink may attach to the platen rib(s) after several dozen sheets are printed, causing soiling at the leading edge of paper or on the back side of paper.	remains after 3 times of Bottom plate cleaning, wipe the platen rib(s) and their surroundings with a cotton swab.	
5	B	Print results	Soiling on paper in automatic duplex printing (lines or streaks perpendicular to the paper feed direction)	- Automatic duplex printing (Photo Paper Plus Double Sided, postcards, plain paper)	On the rib(s) inside the sheet feed unit used for duplex printing, ink mist may accumulate, smearing paper.	**Temporary operational solution:** Cancel automatic duplex printing, and manually print each side of paper. **Cleaning by user:** 1. Perform Bottom plate cleaning (from the MP driver) up to 3 times[*1]. 2. If soiling on the paper still remains after 3 times of Bottom plate cleaning, wipe the platen rib(s) and their surroundings with a cotton swab. If the phenomenon persists after conducting 1 and 2, servicing is required. **Service:** Wipe any soiling or dirt off from the sheet feed unit and the bottom case unit ribs[*2].	- Paper gets smeared. - The back side of paper gets smeared. - Even after Bottom plate cleaning was performed, and the platen ribs were cleaned with cotton swab, paper gets smeared.
			Scratches on paper	- PP-101D, PP-101, PR-101, SG-101, etc. - Paper feeding from the cassette	Scratches on the PF return lever due to paper feeding from the cassette, and duplex printing path.	- Change the paper feeding method from the cassette to the auto sheet feeder. - If automatic duplex printing is performed, cancel it, and, by setting only a single sheet of paper in the auto sheet	- Paper is scratched. - Marks appear on printed paper.

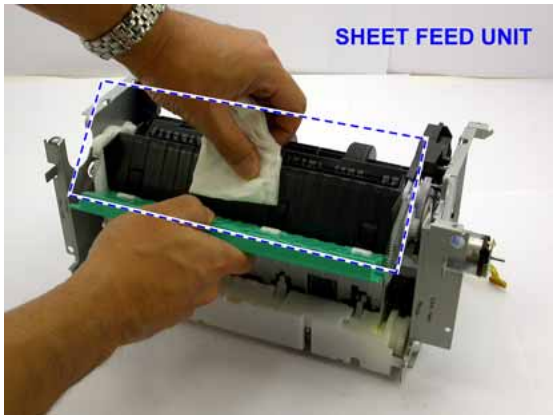
						feeder, manually print each side of paper.	
6	C	Print results		- PP-101D, PP-101, PR-101, SG-101, etc. - Paper feeding from the ASF - Multiple number of sheets loaded	When multiple sheets of paper are set, the back side of paper being picked up scratches the front side of paper beneath (especially where the paper feed rollers contact when picking up the paper).	Set only a single sheet of paper in the auto sheet feeder.	
7	C	Print results	Soiling on paper	The machine has been used for a long period of time with the ASF cover closed before printing is performed using the ASF.	Due to ink mist attached to the ASF sub-pick-up rollers. If printing is done from the cassette with the ASF cover closed, ink mist is kept inside the machine, attaching to the ASF sub-pick-up rollers. Since the sub-rollers usually do not contact the paper, ink mist can easily accumulate, especially during printing on small-sized paper which never contacts the sub-rollers.	Clean the ASF sub-rollers (see *3 for details.)	
8	B	Print results	- Skewed paper feeding	- SG-101 - Paper feeding from the ASF - 10 sheets (max.) set in the ASF	When 10 sheets of paper are set in the ASF, and if they warp significantly, the warping portions of paper get over the cover guide, not being aligned along the guide properly.	- Straighten the paper. - Set 5 or less sheets of paper in the ASF.	- Paper feeds at an angle. - A margin appears on printouts.
			- Improper trimming in Layout print	- Photos taken with a DoCoMo mobile phone and saved in a memory card - In Card Direct Layout print, if the Trimming button is pressed while a thumbnail is displayed, the orientation of the trimmed photo on the LCD differs from the one actually printed.	- In Layout print, photo selection is done using thumbnails. - For photos in general, both the thumbnail and the original image are in landscape. - However, for photos taken with a DoCoMo mobile phone, original images are in portrait while thumbnails		- Print result differs from what is displayed on the LCD.

9	C	Layout print / LCD			are in landscape. If the Trimming button is pressed while thumbnails are displayed, the thumbnail which reflects the trimming effects on the original image is temporarily displayed in portrait, causing the orientation difference. - For easy operation, thumbnails are used in photo selection for Layout print. For this reason, with photos taken with a DoCoMo mobile phone, a display on the LCD does not always match the actual print result.		

*1: Change the paper in each Bottom plate cleaning. The cleaning can end when paper does not get any soiling.

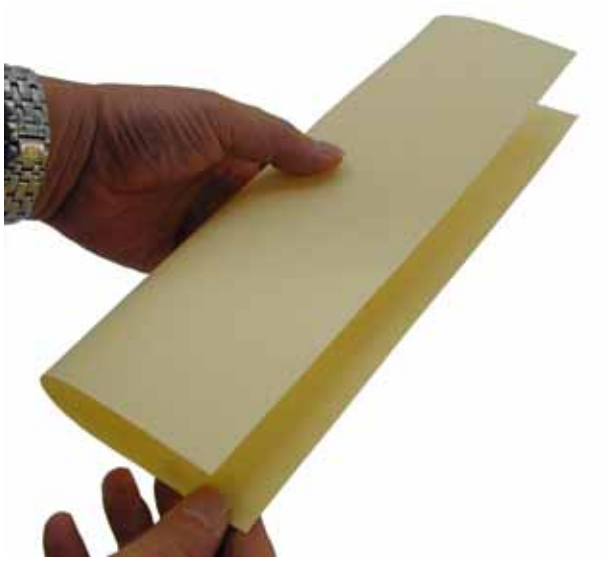
*2: Locations to clean in servicing when soiling on paper in automatic duplex printing persists:



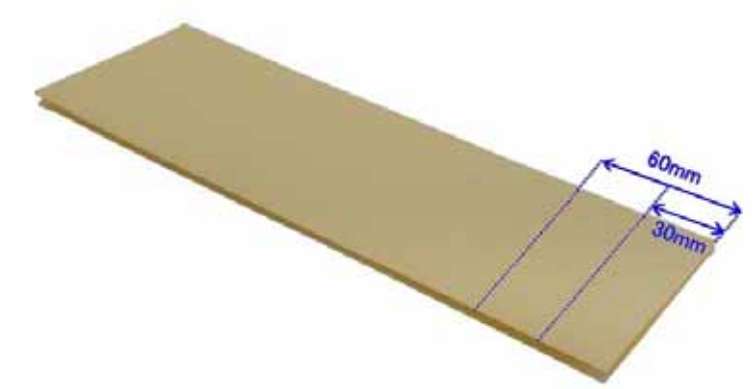


*3: How to prepare and set the ASF sub-roller cleaning sheet:

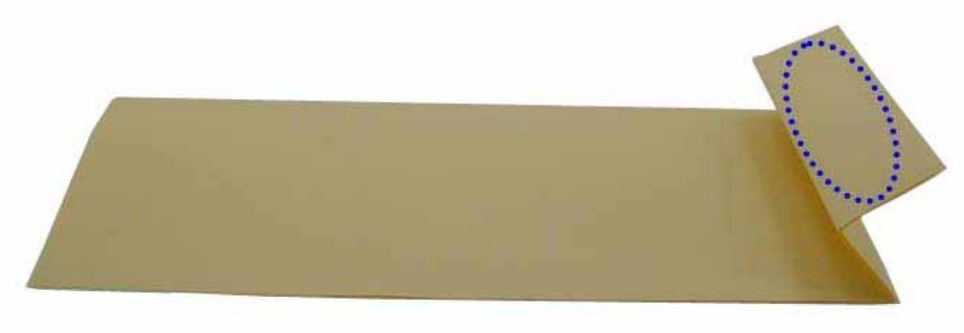
1) Fold a sheet of plain paper lengthwise in half.



2) Fold the paper at approx. 60 mm from the end, and fold the folded end in half backward, as shown below.



3) Moisten the folded end portion (indicated by the blue circle in the figure below) using a wipe, and set the paper in the ASF so that the moistened edge of the paper contacts the 2 sub-rollers. Then, fold the other end of the paper along the ASF cover edge to hook the paper to the ASF cover, as shown below.



4) With the machine turned on in the user mode, press the Menu button. Select Maintenance / Settings, Maintenance, then Roller cleaning. See "Standalone machine operation," for details.

* Occurrence level:

A: The symptom is likely to occur frequently. (Caution required)

B: The symptom may occur under certain conditions, but likeliness is assumed very low in practical usage.

C: The symptom is unlikely to be recognized by the user, and no practical issues are assumed.

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Part 3

APPENDIX

3. PIXMA MP500 SPECIFICATIONS

<Machine>

Type	Desktop serial color bubble jet printer
Paper feeding method	Auto sheet feed (ASF, cassette, automatic duplex printing, CD / DVD printing[*1])
Resolution	9,600 x 2,400dpi (Max.)
Throughput (target value)	- 4 x 6, borderless printing: Approx. 42 sec. (standard mode, PP-101, Full Page SCID No. 2) - 4 x 6, borderless, Camera Direct Printing: Approx. 1 min. 12 sec. (PP-101, default settings) For reference: Black (Fine Black): Fast 29ppm, Standard 14.7ppm Color (Fine Color): Fast 19ppm, Standard 10.7ppm
Printing direction	Bi-directional, uni-directional
Print width	Max. 203.2mm (216mm in borderless printing)
Interface	USB 2.0 Hi-Speed
ASF stacking capacity	Plain paper: Max. 13mm (Approx. 150 sheets of 64g/m^2 paper)
Cassette stacking capacity	Plain paper: Max. 13mm (Approx. 150 sheets of 64g/m^2 paper) (Photo Stickers and Credit Card size not supported)
Paper weight	64 to 105g/m^2
Detection functions	Scanning unit open, Presence of print head / ink tanks, Opening / Closing of paper output tray, Opening / Closing of inner cover, Remaining ink amount (optical / dot count), Printing position, Paper presence, Paper end sensor, Waste ink amount, Internal temperature, Pick-up roller, Paper feed roller position, Carriage position, Head-to-paper distance, Supported camera direct printing device, Presence of CD / DVD[*1], Presence of memory card
Acoustic noise (Highest print quality)	- Highest print quality settings: Approx. 36.6dB (print from a computer) / 38.3dB (copy) - Quiet mode: Approx. 34.7dB
Environmental requirements	During operation: Temperature 5C to 35C (41F to 95F); Humidity 10%RH to 90%RH (no condensation) Non operation: Temperature 0C to 40C (32F to 104F); Humidity 5%RH to 95%RH (no condensation)
Power supply	Power supply voltage, frequency / Power consumption: Standby / Power-off AC 100 to 120V, 50/60Hz: Approx. 20W: Approx. 2.0W / Approx. 0.8W AC 220 to 240V, 50/60Hz: Approx. 20W: Approx. 2.0W / Approx. 0.8W
External dimensions	Machine: With the paper support and output tray retracted: Approx. 448 (W) x 426 (D) x 205 (H) mm With the paper support and output tray extended: Approx. 448 (W) x 600 (D) x 315 (H) mm
Weight	Approx.9.6kg, not including print head and optional units
Related standards (Machine, Adapter)	Electromagnetic radiance: VCCI, FCC, IC, CE Mark, Taiwan EMC, C-tick, CCC (EMC), Korea MIC, Gost-R Electrical safety: Electrical Appliance and Material Safety Law (DENAN), UL, C-UL, CB Report, CE Mark, GS, Gost-R, FT, SASO, CCC, SPRING, Korea EK, IRAM (Argentine) Environmental regulations: RoHS (EU), WEEE (EU), Korea Package Recycle Law, Green Point (Germany), Energy Star, Eco Mark, Law on Promoting Green Purchasing

Serial number location	On the carriage flexible cable holder (visible when the scanning unit is open)
Remaining ink amount detection	Available (automatic detection by optical method and dot count, enabled at default)
Paper type detection	Not available
Print head alignment	Available (automatic or manual alignment via MP driver Maintenance, or via the operation panel button in Camera Direct Printing, automatic alignment at default)

*1: Only for CD / DVD printing supported regions

<Scanner>

Type	Flat bed scanner (scanning of a fixed document by a moving scanner head)
Sensor type	CIS (Contact Image Sensor)
Optical resolution	1,200 x 2,400 dpi (max.)
Scanning resolution	19,200 x 19,200 dpi (max.)
Gradation (input / output)	Grayscale: 16 bit / 8 bit Color: 48 bit / 24 bit (RGB each color 16 bit / 8 bit)
Document size	A4 / LTR (max.)

<Copy>

Copy quality	3 levels (Fast, Standard, High)		
Intensity	9 levels		
Enlargement / reduction ratio	25 to 400%		
Copy speed		Fast	Standard
	Monochrome (Fine Black)	29cpm	14.9cpm
	Color (Fine Color)	19cpm	5.1cpm
	Conditions: The duration from ejection of the first page to ejection of the 11th page in continuous copy is converted into cpm.		
Document size	A4 / LTR (max.)		
Enlargement / reduction	Preset ratio: max. (400%), 4x6 -> 8.5x11 (212%), 5x7 -> 8.5x11 (170%), A5 -> A4 (141%), B5 -> A4 (115%), 100%, A4 -> 8.5x11 (95%), A4 -> B5 (86%), A4 -> A5 (70%), min. (25%) Zoom: 25 to 400% (in increments of 1%)		
Number of continuous copies	Monochrome / color: 1 to 99 copies		

<Direct printing>

Memory card drive	Supported memory card	Compact Flash TYPE I/II (3.3V), Microdrive, SmartMedia Card (3.3V only), Memory Stick, Memory Stick PRO, SD Card, MultiMedia Card, xD-Picture Card*, miniSD memory card*, Memory Stick Duo*, Memory Stick PRO Duo*
Storage function	Operation	Via the machine buttons.
	Condition	Before changing the settings, the memory card must be removed.

	Function	Read / Write
Card Direct Printing	Operation panel	2.5 color LCD, 19 buttons, 6 LEDs
	File format	JPEG (DCF, CIFF, Exif 2.21 or prior, JFIF), DPOF compliant
	Supported print paper	[See 4, PRINT MEDIA SPECIFICATIONS]
	Print quality	Standard, High
	Image correction function	Photo Optimizer PRO, VIVID, noise reduction, face brightener, image optimizer
	Image adjustment function	Brightness, contrast, hue (skin tones)
	Image processing function	None
	Image retrieval function	Available (date)
	DPOF	Ver. 1.00 compliant Index printing, printing of an image the specified number of copies, printing of the specified image(s), printing with the shooting date
	Print layout	Single-photo/multi-photo/all-photo printing: 1 photo per page (borderless/with borders, only with borders for plain paper)
		DPOF printing: 1 photo per page (borderless/with borders) 6, 15, 24, 35, 80 photos per page 30 photos per page (panorama)
		Index printing: 6, 15, 24, 35, 80 photos per page 30 photos per page (panorama)
		Layout printing: 2, 4, 8 photos per page (borderless/with borders) Postcard (borderless/with borders, with/without lines) Album (4 photos per page, right/left) Mix 3 types (for A4/LTR)
		Sticker printing: 2, 4, 9, 16 stickers 1, 5, 6, 7 stickers (for free-cut)
	Information print	Date, file number
	Throughput	Approx. 1 minutes 16 seconds, with the following conditions and settings: - A photo from a 5 mega-pixel digital camera - 4 x 6 borderless - Exif print - Standard print quality - Process from pressing the printing start button to ejecting paper
Camera Direct Printing	Supported digital camera	Digital cameras and digital video cameras supporting Bubble Jet Direct or PictBridge
	Supported print paper	[See 4, PRINT MEDIA SPECIFICATIONS]
	Print layout	- 1 photo per page (borderless/with borders) - 2, 4, 9, 16 photos per page
	Information print	Date, file number
		Approx. 1 minute and 12 seconds, with the following conditions and settings:

	Throughput	- A photo from a 5 mega-pixel digital camera - No image correction - 4 x 6 borderless - Standard print quality - Process from pressing the printing start button to ejecting paper
Print Beam printing	Supported mobile phone	Mobile phone equipped with IrDA 1.2 port, or with Bluetooth 1.2 port (when the optional BU-20 is attached to the machine)
	Printable data	Image (JPEG only, text printing not possible)
	Supported print paper	[See 4, PRINT MEDIA SPECIFICATIONS]
	Supported layout	1, 2, 4, 8 images per page (borderless) 1, 2, 4, 5, 6, 7, 8, 9, 16 images per page (bordered)
Printing via Bluetooth communication (optional)	Standard	Bluetooth version 1.2
	Output	Bluetooth Power Class 2
	Communication range	Good for approx. 10 m in radius (depending on interference between the communication devices, or radio wave conditions)
	Frequency band	2.4GHz
	Communication speed	Approx. 720kbps
	Supported profile	BIP, OPP, SPP, HCRP
	Supported OS for HCRP	- Windows XP Service Pack 2 or later - Windows XP Service Pack 1 or later: Microsoft "Support for Bluetooth Wireless Devices" or Toshiba Bluetooth Stack for Windows Ver. 3.00.10 or later has to be installed - Mac OS X 10.3.3 or later
	BU-20 external dimensions	18.5 (W) x 47.5 (D) x 8.7 (H) mm with a cap
	BU-20 weight	Approx. 7g
	BU-20 power supply voltage	4.4 to 5.25V
	BU-20 power consumption	500mW (max.)
	BU-20 operating temperature	5C to 35C (41F to 95F)
	BU-20 operating humidity	10%RHto 90%RH (no condensation)

* Adapter required.

<Print head>

Type	Single head with 5 removable ink tanks (each color)
Print head	Pigment-based BK: 320 nozzles, 600 dpi, 30 pl Dye-based BK / C / M / Y: 256 x 6 nozzles, 1,200 dpi, 1 pl / 5 pl (C / M), 5 pl (BK / Y)
Ink color	Pigment-based black Dye-based black, cyan, magenta, yellow
Ink tank	PGI-5BK (pigment-based), CLI-8BK / C / M / Y (dye-based)
Weight (Net)	Print head, approx. 56g
Supply method	As a service part (not including ink tanks)
Part number	QY6-0059-000

<Supported ink tanks>

Model name and destination		BCI-9BK	PGI-5BK	BCI-7eBK	BCI-7eC	BCI-7eM	BCI-7eY	CLI-8BK	CLI-8C	CLI-8M	CLI-8Y
		Pigment-based ink		Dye-based ink							
PIXUS MP500	Japan	O	X	O	O	O	O	X	X	X	X
PIXMA MP500	Other than Japan	X	O	X	X	X	X	O	O	O	O

O: Usable

X: Not usable

Note: The ink tanks for the Japanese models are not compatible with those for the non-Japanese models. Be sure to use the appropriate ink tanks in servicing.

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<Part 3: 3. PIXMA MP500 SPECIFICATIONS>

4. PRINT MEDIA SPECIFICATIONS

<Plain paper / specialty paper>

The following types of paper are recommended:

Type	Name	Size	Paper feeding method (auto)	Sheet feeder stacking capacity (max.)	Camera Direct Printing	Card Direct Printing	Print Beam Printing
Plain paper	64 to 105 g/m^2	A4, B5, LTR, A5, LGL[*1]	ASF, Cassette	13 mm	Yes[*2]	Yes	Yes
Super White Paper	SW-101/201	A4, LTR	ASF, Cassette	13 mm			
High Resolution Paper	HR-101	A4, B5, LTR	ASF, Cassette	Approx. 80 sheets			
Glossy Photo Paper	GP-401	A4, LTR	ASF, Cassette	10 sheets	Yes	Yes	Yes
	GP-401 4x6	101.6 x 152.4 mm	ASF, Cassette	20 sheets	Yes	Yes	Yes
	GP-401 Credit Card	54 x 86 mm	ASF	20 sheets	Yes	Yes	
	GP-501	A4, LTR	ASF, Cassette	10 sheets	Yes	Yes	Yes
	GP-501 4x6	101.6 x 152.4 mm	ASF, Cassette	20 sheets	Yes	Yes	Yes
Photo Paper Pro	PR-101	A4, LTR	ASF, Cassette	10 sheets	Yes	Yes	Yes
	PR-101 4x6	101.6 x 152.4 mm	ASF, Cassette	20 sheets	Yes	Yes	Yes
	PR-101 4x8	101.6 x 203.2 mm	ASF, Cassette	20 sheets			
Photo Paper Plus Glossy	PP-101	A4, LTR	ASF, Cassette	10 sheets	Yes		
	PP-101 4x6	101.6 x 152.4 mm	ASF, Cassette	20 sheets	Yes		
	PP-101 5x7	127 x 178 mm	ASF, Cassette	10 sheets	Yes		
Matte Photo Paper	MP-101	A4, LTR	ASF, Cassette	10 sheets		Yes	Yes
	MP-101 4x6	101.6 x 152.4 mm	ASF, Cassette	20 sheets		Yes	Yes
Photo Paper Plus Semi-gloss	SG-101	A4, LTR	ASF, Cassette	10 sheets	Yes	Yes	
	SG-101 4x6	101.6 x 152.4 mm	ASF, Cassette	20 sheets	Yes	Yes	
Photo Paper Plus Double Sided	PP-101D	A4, LTR	ASF, Cassette	10 sheets			
	PP-101D 5x7	127 x 178 mm	ASF, Cassette	10 sheets			
Transparency	CF-102	A4, LTR	ASF, Cassette	30 sheets			

T-shirt transfer	TR-301	A4	ASF, Cassette	1 sheet			
Envelope	COM #10	241 x 105 mm	ASF / Cassette	10 / 5 envelopes			
	DL-size	220 x 110 mm	ASF / Cassette	10 / 5 envelopes			

*1: ASF only for LGL

*2: When A4 or LTR is selected for Paper Size, plain paper is selectable for Paper Type. With plain paper selected for Paper Type, printing is done with borders even when borderless printing is selected.

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<Part 3: 4. PRINT MEDIA SPECIFICATIONS>